

American Artisan and Hardware Record

Sheet Metal—Roofing—Warm Air Furnaces—Stores

Vol. 91, No. 7

CHICAGO, FEBRUARY 13, 1926.

\$2.00 Per Year



It's easy to work with Zinc

Not only is it easy to work with Horse Head Zinc, but it is easy to do good work with it. And that counts most in building up and keeping trade in the sheet metal business.

Horse Head Zinc is pure, high grade zinc. It forms easily and will not crack. Every sheet that leaves our rolling mill has before it a lifetime of rust-proof service. When you install leaders and gutters and standing seam roofing of Horse Head

Zinc you have erected a silent salesman who will bring you more business.

Recommend Horse Head Zinc for permanence and economy. Just clip this coupon for a sample.

THE NEW JERSEY ZINC COMPANY

160 Front Street, New York City

PLEASE SEND ME A SAMPLE OF HORSE HEAD ZINC.

MR. _____

ADDRESS _____
2-A

The New Jersey Zinc Company • 160 Front Street, New York City



CLASS OF SERVICE	SYMBOL
TELEGRAM	
DAY LETTER	BLUE
NIGHT MESSAGE	NITE
NIGHT LETTER	N L

If none of these three symbols appears after the check (number of words) this is a telegram. Otherwise its character is indicated by the symbol appearing after the check.

WESTERN UNION TELEGRAM

NEWCOMB CARLTON, PRESIDENT GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT

The filing time as shown in the date line on full-rate telegrams and day letters, and the time of receipt at destination as shown on all messages, is STANDARD TIME.

Received at Pantlind Hotel Branch Office, Grand Rapids, Mich.

Hours: 8 A. M. to 11 P. M.
Closed Sundays and Holidays

55GP B 26

G DETROIT MICH 358P SEP 12 1924

LOUIE BERG

PANTLIND HOTEL GRANDRAPIDS MICH

DONT SIGN FURNACE CONTRACT UNTIL HOMER LINE INVESTIGATED

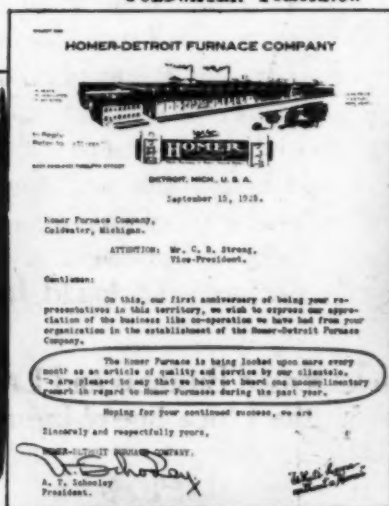
HAD INTERESTING INTERVIEW WITH HOMER REPRESENTATIVE

CONVINCED THEIR PROPOSITION BEST YET WILL MEET YOU

COLDWATER TOMORROW

TOM SCHOOLEY

317P



Before Signing 1926 Furnace Contracts Interview Ros Strong regarding their sales plans and investigate the Homer Line on Display at the Conventions. It means a greater furnace sales volume because of Homer Qualities.

The Proof of a Warm Air Furnace is the Real Heating Economy It Provides

Today, when every one is somewhat sceptical until proof influences definite decisions, we are inclined to doubt

statements set forth regarding certain qualities of advertised products. However, when proof has demonstrated to the satisfaction of others that statements as advertised are authentic, it immediately eliminates doubt and commands respect.

This is the position Homer Furnace claims have attained. Users far and wide are hearty endorsers of the Heating Economy which is enjoyed through the operation of Homer Warm Air Furnaces.

HOMER FURNACE CO., Coldwater, Mich., U. S. A.

HOMER FURNACE CO., PORTLAND, ORE., *Pacific Coast Distributors*
THE CINCINNATI SHEET METAL & ROOFING CO., CINCINNATI, OHIO, *Southern Distributors*
JANNEY, SEMPLE, HILL & CO., MINNEAPOLIS, MINN., *Northwestern Distributors*
M. A. KARP & SON, 183-6th Ave., NEW YORK, N. Y., *Eastern Distributors*
MILWAUKEE STOVE & FURNACE REPAIR CO., MILWAUKEE, WIS., *Eastern Wisconsin Distributors*

Capacity 30,000
Furnaces Annually

There's Harmony
in
Homer Heated
Homes

You Can Increase! Your 1926 Business!

The **SUPER-SMOKELESS** Furnace is the only really smokeless furnace on the market. It brings satisfied customers and earns big profits for Dealers.



Cutaway View of
SUPER-SMOKELESS FURNACE

YOU can increase your 1926 Business by taking on the Utica line of furnaces. The Utica **SUPER-SMOKELESS** Furnace has definitely superior features found in no other furnace. It offers outstanding advantages to the Home Owner, and places the dealer above ordinary competition. You can get a real price for your work and reap larger profits with this remarkable furnace.

The new Utica Merchandising Plan will also bring more customers—sell more furnaces—and increase your profits. It has been thoroughly tested and is a *proved success*. Under this plan our representatives co-operate closely with our dealers and help them sell the furnaces they buy. It enables them to secure the largest possible amount of business and to secure satisfied customers who build future business.

It will mean Increased Business and Larger Profits to take on the Utica line of furnaces. Let us send, without obligation to you, full particulars about our **SUPER-SMOKELESS** Furnaces and Utica Merchandising Plan.

UTICA HEATER COMPANY

UTICA, N. Y.

Manufacturers of the

CHICAGO, ILL.

CELEBRATED LINE OF WARM AIR FURNACES FOR EVERY HEATING NEED



UTICA HEATER COMPANY, Utica, N. Y.

Gentlemen:

Please send, without obligation to me, complete information about your **SUPER-SMOKELESS** Furnace and the new **UTICA MERCHANDISING PLAN**.

Name

Address

F2-104

Be sure that the steel furnace you sell is high grade and reliable—

NOW that steel furnaces are coming on the market fast to catch the profits that the stupendous increase in demand is giving watch carefully or you will make a mistake.

Don't handle *any* steel furnace—remember that steel furnaces can be made cheaply, low in quality and scantily as well as cast furnaces. Remember that your customers are swinging to steel furnaces because they are learning of the high grade construction, longer life, more efficient heating and leak proof construction that *high quality* steel furnaces provide.

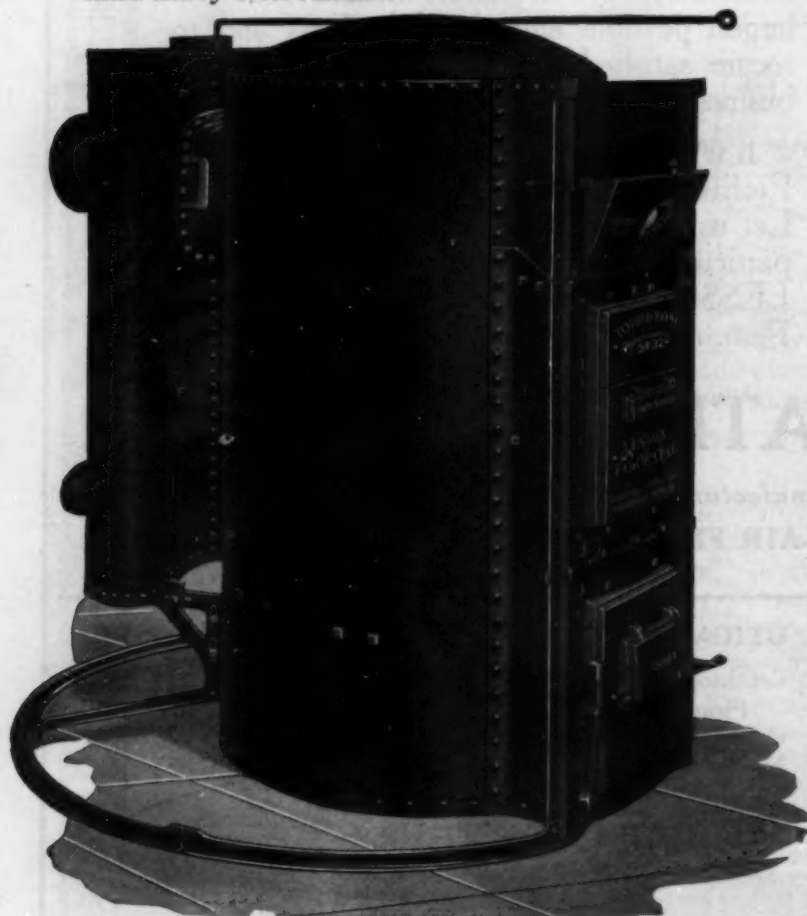
The Torrid Zone Furnace has been on the market for *over thirty years*. It is as high grade in construction, quality and design as a warm air furnace can be.

Its many features of construction are *patented* and *exclusive* to the *Torrid Zone*.

Many of these features are new and have made the Torrid Zone a true sensation in the industry.

Handle a steel furnace and catch the growing profits indeed—but be sure that the steel furnace you sell is a furnace that will *stay sold*.

Let us tell you about the Torrid Zone *guaranteed* extra heavy steel furnace.



Made by The World's Largest Manufacturers of Steel Furnaces.

*10 year
Guaranty*

Lennox Torrid Zone Furnace

*Heavier
Steel*

THIS is the new Type E Torrid Zone with new and exclusive features embodied in—Dovetail Collar—Radiator Damper Assembly—Brick Guards—Grates—Water Pan and Base Ring.

Study this construction. Write for our catalog today and you will see the difference.

The Lennox Agency is open to live dealers in every territory where the Torrid Zone is not already represented. Just drop us a line and if you are in open territory we will get busy and show you in detail what the Lennox Agency means.

The Lennox Furnace Co.

Marshalltown,
Iowa

Syracuse,
New York

Mention AMERICAN ARTISAN in your reply—Thank you!



Quality tells, not only in the long run, but in every run

THE saying that "Quality Tells in the Long Run" is quite true, yet when speaking of warm air furnaces and furnace pipe runs quality tells in every run.

Abundant clean heat is assured the home owner from every pipe run if a quality furnace is properly installed in the basement. That's how you can sell **ATH-A-NOR** quality furnaces—by their **performance** as well as their feature construction. That's how to sell warm air heating—by emphasizing the health giving, comfortable and superior heating service to be obtained by installations of **ATH-A-NOR** warm air furnaces.

ATH-A-NOR FURNACES are well known and known well because of Efficient Heating, Economy in first cost and upkeep and for their powerful heating ability.

ATH-A-NOR furnaces should be the backbone of your Warm-Air Heating Business.



**The MAY-FIEBEGER
FURNACE COMPANY**

Newark, Ohio

Still Seamless—and Now, also—

**NEW
Design
HEAVIER
Construction**

TAKE advantage of the big demand for steel furnaces by selling the new, greatly improved

**WATERBURY
SEAMLESS FURNACE**
PIPE OR PIPELESS

It brings new standards of comfort and economy to users—more sales and profits to dealers. Write today!

Waterman-Waterbury Co.
1121 Jackson St., N. E.
Minneapolis, Minn.



**LARGER
Radiator
Ten Year
Guarantee**

Send me full information

Name.....

Address.....

When writing mention **AMERICAN ARTISAN**—Thank you!

Acomplete Furnace and Supply Service!

THE furnaces shown here, the Nesbit, the Weir and the Stanco, fit your every requirement for quality warm air heating and at the right price.



Nesbit All-Cast Furnace

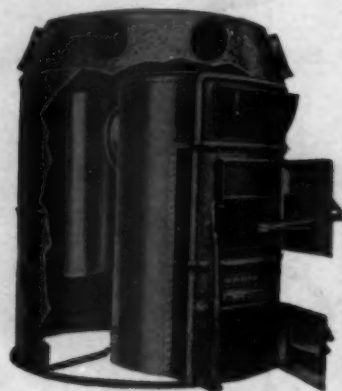
LET us send you full details and catalogs covering this line. Let us show you the completeness of our furnace line and demonstrate our reliable service.



Weir All-Steel Furnace

WE carry large stocks of every needed furnace supply item from Registers to Furnace Cement. All leading makes and dependable quality.

*Let us fill your next order—
we will give you real service.*



Stanco Steel Furnace

STANDARD FURNACE & SUPPLY COMPANY
Omaha, Nebr. Western Service for Western Dealers Sioux City, Iowa

FLORAL CITY FURNACES



Are made in several
styles and many sizes

Write for catalogue and
agency proposition

Sold to the Trade Only

40 YEARS' EXPERIENCE

FLORAL CITY HEATING CO.

Chicago Office
1654 Monadnock Bldg.

MONROE, MICH.

Detroit Office
413 West Fort Street



Those CLINKERS in the Furnace can best be removed by a



PAT'D AUG. 13, 1919

**FEDERAL
CLINKER TONGS**

Good profit to dealers. Send 50c for sample and particulars.

FEDERAL MFG. CO., HOLLAND, MICH.

Say you saw it in AMERICAN ARTISAN—Thank you!

New name, new features, old time high quality, improved construction, a new size and also a new furnace—

AFCO

New Copyrighted Name of American Furnaces

BOILER PLATE FURNACES

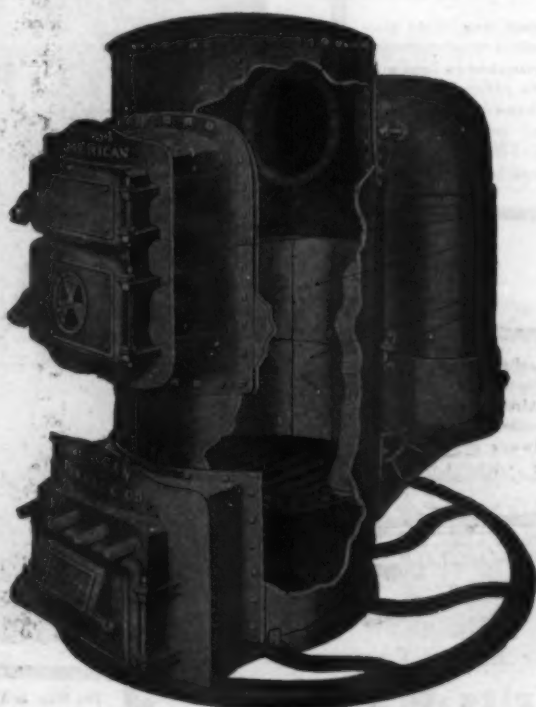
THE American Agency for 1926 means more than ever before with these new and better business getting assets.

We have increased our production facilities also by installing \$50,000 worth of new machinery.

We want to tell you in detail all about the improvements on AFCO BOILER PLATE FURNACES and the new size and also our NEW CRESCENT TYPE RADIATOR STEEL FURNACE.

Write today for complete details and the American Agency offer.

AMERICAN FURNACE CO.
2719 to 2731 Morgan Street St. Louis, Mo.



"AFCO" BOILER PLATE FURNACE
(Formerly Known as the AMERICAN)

BOOMER

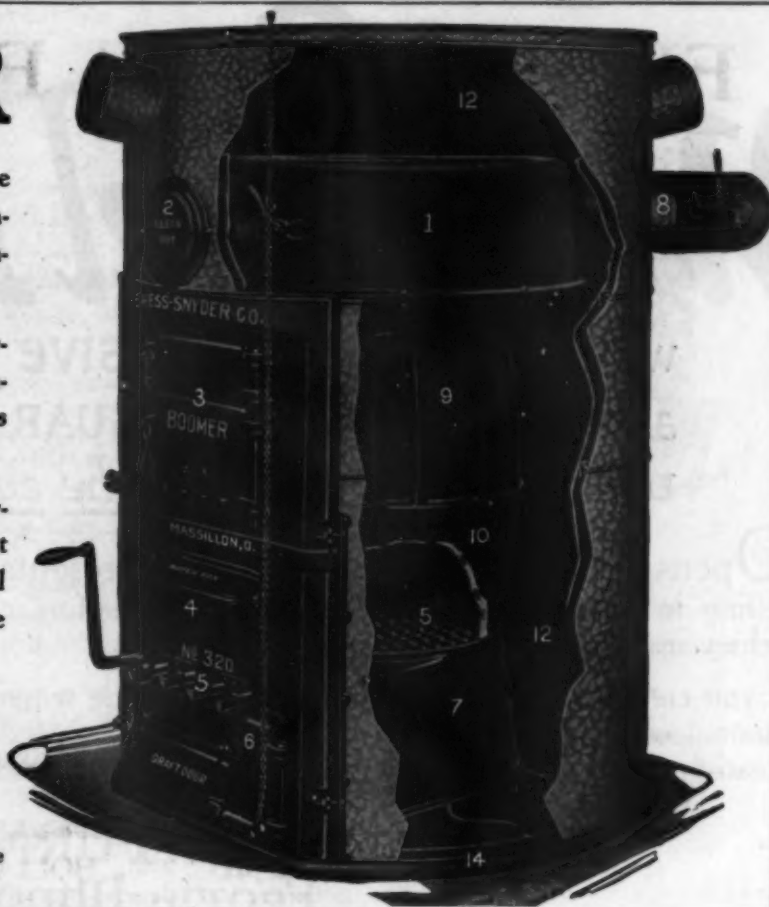
THIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

THE HESS-SNYDER CO.
MASSILLON, OHIO

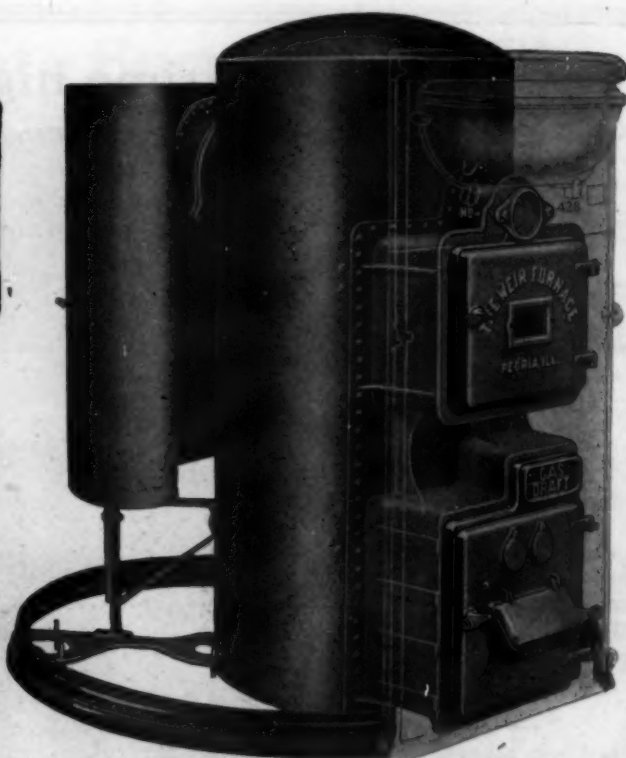
Makers of BOOMER FURNACES for Forty-Three Years



Mention AMERICAN ARTISAN in your reply—Thank you!

1 The biggest new Weir feature—notice the phantom view—the pouches or feed and ash throats extend thru the front. There are no door frames and no joint inside the casing. Doors are fitted direct to pouches.

2 Both pouches and doors are surface ground—absolutely perfect fitting. Notice turn-buckle handle—straight door bolts. Always a perfect-fitting door with this new feature.



3 The feed and ash pouches are in one piece, which is air-tight riveted to the main drum. There is absolutely no possibility of leakage inside the Weir casing. The supports for the radiator fit on lugs—no bolts thru the drum.

4 The Weir Five Year Guarantee covers the entire furnace. Grates, fire pot and each and every part is covered by this guarantee. We make this guarantee direct with the user and it is a real guarantee with no strings. This generous guarantee is possible because we know that the Weir needs no replacing of parts within five years. Many 40 year old Weirs are still in service.

**Write today
for 1926
agency details**

5 The Weir is the one furnace for Oil Burning, because of absolutely leak-proof construction, no dampers. Weir is fitted with special doors for Oil Burner installation or can always be converted for such use. The Weir will actually hold oil.

Write for the



"WEIR Book
of Facts"

Weir Steel Furnace

with these new, exclusive improvements
and a real FIVE YEAR GUARANTEE direct
to the user covering the entire Weir Furnace

Opens up a new opportunity and presents new reasons for you to start selling in your territory (if it is open) the one furnace that has an unbeatable record of achievement extending over forty-three years.

If you are interested in selling the highest grade warm air furnace possible of production—guaranteed furnaces, guaranteed installations, guaranteed heating capacity and commensurate steady profits, *write* today for information or have a WEIR representative call on you.

The MEYER FURNACE Co.
Peoria, Illinois

When writing mention AMERICAN ARTISAN—Thank you!



Below are shown a few typical Rybolt heated homes taken at random from the many photographs in our files.

We Want To Send You This Catalog

---if you are open to consider an exclusive agency for the Rybolt Warm Air Furnace in your town (provided we have no dealers there).

The sales of Rybolt furnaces have been steadily increasing year after year for over sixteen years. Last year, the increase reached the remarkable figure of 50%, and we anticipate an equal or greater increase for 1926.

If you are specializing in warm air heating on the basis of a quality job at a fair price, you can make more money now and safeguard the future of your business with the Rybolt furnace, plus the backing of the Rybolt organization.

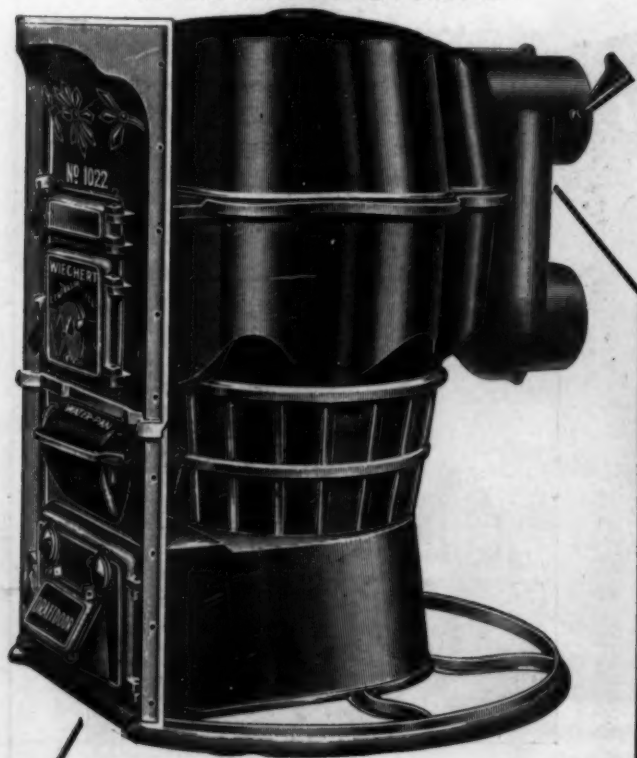
Write for the Catalogue today.

THE RYBOLT HEATER COMPANY
Dept. A, Ashland, Ohio

Below—A miniature reproduction of the famous Rybolt house sign—the sign of insured home comfort



No. 1000 SERIES PIPE FURNACES



The Diving Flue Is a Big Feature of WIECHERT FURNACES

The diving flue extends inside the radiator at the middle of the upper wall. It has two smoke outlets—one direct to the chimney and the other at the bottom of the diving flue. The direct draft damper is automatically operated by a chain connected to the lower feed door, so that the damper opens with the feed door, allowing a direct draft to the chimney and preventing smoke from coming out of the feed door. When the direct damper is closed the smoke must go down the diving flue to the lower outlet. This traps the heat in the radiator, increasing the efficiency of the furnace.

Do you know about the other Wiechert features?
Send for full particulars, today.

St. Clair Foundry Corporation
Centralia, Ill. Belleville, Ill.



Advt. No. 4.
of a series



Why Not Work A Double Life?

YOU might as well make your licks count double when you're working.

The dealer who installs Moncrief Furnaces makes a good profit,

—and gains the lasting good will of his customers in addition,

—which usually results in selling another Moncrief.

There is double satisfaction in many ways when you handle the Moncrief line.

Write for details

The Henry Furnace & Foundry Co.

3471 E. 49th Street

Cleveland, Ohio

Manufacturers of single and double wall pipe
and fittings, galvanized pipe and fittings, etc.

Eastern Sales Offices:

E. L. GARNER	F. H. HANLON	W. S. McCREA
177 13rd St.	Batavia, New York	105 Federal St., N. S.
Jackson Heights, L. I., N. Y.		Pittsburgh, Pa.

Western and Southern Distributors:

JOHNSON FURNACE CO.	MONCRIEF FURNACE CO.
Kansas City, Missouri	Atlanta, Ga.
MONCRIEF FURNACE & MFG. CO.	
Dallas, Texas	

MONCRIEF FURNACES

Mention AMERICAN ARTISAN in your reply—Thank you!

WISE FURNACES



THE construction of the Wise furnace is something more than castings fitted together. Such important details as design and proportion of the radiator and fire pot on Wise furnaces show that in these points of construction, as well as all other features, great care has been taken to have them scientifically correct.

Proper, satisfactory heating can only be had from furnaces that can produce correct combustion. And not only this—a furnace must also have a great area of heating surface and large even flow of air circulation.

Wise furnaces are designed to give superior heating service and they are constructed of the best grade iron.

*OUR catalog gives full details
and our agency proposition
will interest you. Write or
complete information today.*

**The WISE FURNACE CO.
AKRON, OHIO**



The WESTERN BOILER PLATE FURNACE SPECIAL FEATURES:

1. The two flue radiator with its "V" baffle plate retards the smoke travel sufficiently to obtain complete heat extraction.
2. The heavy gauge sheets of boiler plate from which the body and head are constructed are made of copper bearing steel.
3. The corrugated top equalizes the expansion and contraction giving unusual strength to the furnace where it is needed.
4. The combustion chamber measures forty-five inches from the top of the grates to the head. This feature results in greater brushing surface.
5. The hot blast smoke and gas consumer admits oxygen in amount sufficient to assure complete combustion of the fuel.
6. The heavy grates operate as a single unit and are shaken from a standing position by the furnace user.

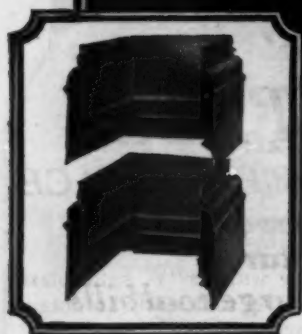
And when you remember that the Western is backed by an Iron-Clad Guarantee and that it is the most reasonably priced steel furnace on the market you can easily realize that its agency is a money maker.

Write today for complete information.

Complete Stocks carried by these distributors
SOUTHERN ILLINOIS
American Foundry and Furnace Co., Bloomington, Ill.
KANSAS AND MISSOURI
Kansas City Furnace Co., Kansas City, Mo.

**THE WESTERN STEEL PRODUCTS CO.
DULUTH, MINN. MINNEAPOLIS, MINN.**

The Unseen Hand that Robs Your Till!



He visits every type of business, talking unbelievable profits and fabulous savings, intriguing with his gilded promises—yet robbing with his unseen hand the very till his promises would fill to overflowing. "Buy cheaply" is the slogan of *False Economy*. Beware of him!

Compare Lamneck Products with others in appearance, in materials, gauge and workmanship. Put them together. See how snugly and sturdily they fit. Do this. Write for a sample. Get our catalog. Just fill in or pin to your letterhead and—

**Mail This
Coupon Now!**

THE W. E.
LAMNECK CO.

Gentlemen:

Kindly send me at once, free and without obligation, the items indicated below:

() Your New Catalog.

() Sample of

Name

Address

THE dangerous thing about price buying is that business men who do it pride themselves on their good judgment, whereas, too often, they merely play into the hands of False Economy. Too often, even though buying for less, they actually pay far more at the outset than the cost of good products, and many times more in the trouble that follows.

Lamneck Pipe and Fittings challenge comparison from any standpoint. They are sold at quantity production prices and as cheaply as good products can be sold. It is an economic impossibility to make pipe and fittings as

good as the Lamneck Line and sell them for one penny less.

They are designed by skilled engineers, made by expert labor and turned out on machinery especially designed for the purpose. They are the best that skill, experience and good materials can make.

Back expert wormanship with the special patented features of Lamnecks that save valuable time, trouble and come-backs, and add to that Lamneck-48-Hour-Service and you have every reason for standardizing on the Lamneck Line.

THE W. E. LAMNECK COMPANY

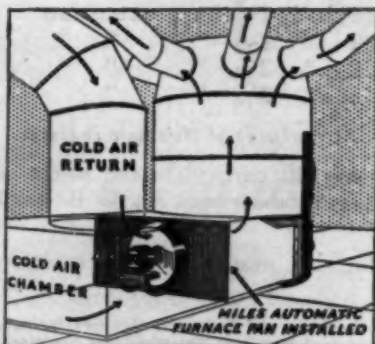
416-432 Dublin Ave., Columbus, Ohio

Western Representative: THE QUICK FURNACE & SUPPLY CO., Des Moines, Iowa

LAMNECK PIPE AND FITTINGS

Now you can cure every "sick" furnace job

*It
pushes
the
heat
up
the
pipes*



A "sick" furnace job usually proclaims itself by one or more of these twelve indications of wastefulness.

- | | |
|--|-------------------------|
| 1. Overheated furnace. | 6. Cold rooms |
| 2. Hot basement | 7. Sluggish air flow |
| 3. Hot stack or smoke pipe temperature | 8. Cold registers |
| 4. Discolored furnace casing | 9. Slow heating |
| 5. Discolored smoke pipe | 10. Extremely hot air |
| | 11. Dried out furniture |
| | 12. Large coal bills |

You can cure all or any of these ills by means of *The Miles Automatic Furnace Fan*. It puts positive pressure behind the air circulation and pushes the heat up the pipes.

This means hundreds of new contacts, new profits, new sales, more satisfied customers.

Write for new catalog which tells the whole story in detail.

Better still order a Miles Automatic Furnace Fan at once, install it, watch results and get yourself tuned up for the big business that will surely come to you through the new science of *Forced Air Heating*.

Don't wait—don't delay—get yourself on record now. Write today for complete information.



THE WARM AIR FURNACE FAN COMPANY
6511 Cedar Avenue, Cleveland, Ohio

MILES AUTOMATIC FURNACE FAN

EXCELSIOR HEATING SPECIALTIES

*No Extra Charge for
EXCELSIOR QUALITY*



THE
EXCELSIOR FAMOUS
A Standard Furnace sold at
a Competitive Price



N. S. No. 208 BOOT

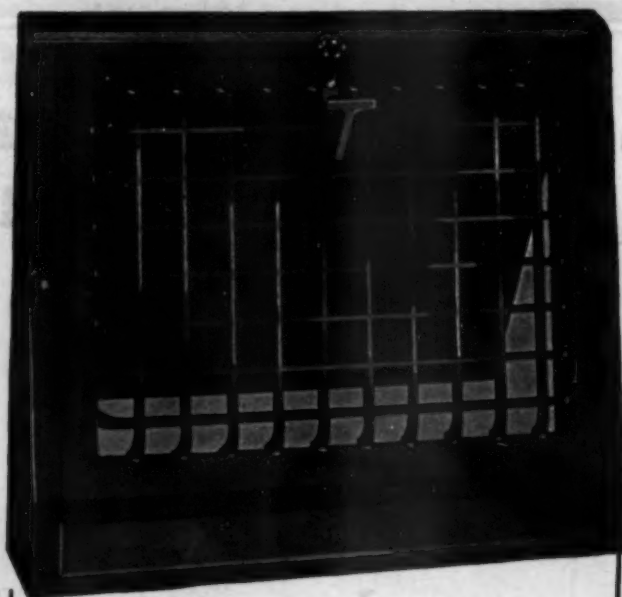
NOTE THE EYELET

A much better way of fastening Boots to Floor Joists. Another demonstration of Excelsior leadership.

Write for Catalogs

THE EXCELSIOR STEEL FURNACE CO.

114-118 S. Clinton St.
CHICAGO - ILLINOIS



Have you seen it?

WALWORTH

*New Standardized
STYLE B*

Baseboard Register

NOT only made throughout in accordance with the rules of the Standardization Committee but it is the *neatest* durable register ever made to sell at a popular price.

Simple, easy and accurate in operation, cast face made of the best iron, finished in all the popular finishes and made in the following sizes:

8x10	inch	2 1/4	base	extension
8x12	"	2 1/4	"	"
9x12	"	2 1/4	"	"
10x12	"	3 1/4	"	"

Study the features of this new register.

Write today for full particulars and prices on the Walworth New Standardized Style B Baseboard Register.

Order some for that next job—your customers will want them.

*Made by the makers of Walworth Double Gratings,
Semi-Steel Registers, Side Wall and Floor Registers,
Ventilators, Borders and Casings Rings.*

THE WALWORTH RUN FOUNDRY COMPANY

West 27th Street and N. Y. C. & St. L. R. R., Cleveland, Ohio

Distributors:

ROBINSON FURNACE CO., Chicago, Ill.
HART MFG. CO., Louisville, Ky.
PHILLIPS & BUTTORFF MFG. CO., Nashville, Tenn.

Eastern Representative:

PENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.



THE NATION'S BEST FURNACE PIPE FOR 69 YEARS!

It's Handy by Name!

It's Handy to Get!

It's Handy to Work With!

F. MEYER & BRO. CO.

1311-13 S. Adams St.

Peoria, Illinois

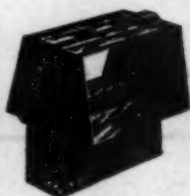
Established

1902

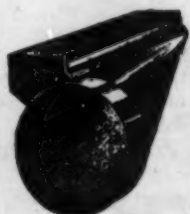


CHICAGO

FURNACE PIPE AND FITTINGS



All Sizes
and
Shapes



For Satisfaction *all the time* and high quality and price.

YOU don't have to fuss with pipe—the latest type of machinery makes Chicago Pipe accurate fitting. The design is correct too and you'll like the weight and quality of Chicago Pipe the more you use it.

It's strong and well made. You'll know why Chicago Pipe is such a big favorite when you examine its quality and construction and compare its price with other makes.

Write for Price List Today.

CHICAGO FURNACE SUPPLY CO.
1276-78-80-82 Clybourn Ave. CHICAGO



It will pay you
To Buy your
Stove Trimmings
From Us

LARGE selection—
beautifully finished.
Made from our own
steel.

Let us quote you

AMERICAN TUBE & STAMPING
COMPANY
THE FULL COMPLETE

"American Seal"

FURNACE CEMENT

Roof Cement — Stove Putty
Plumbers Putty

PAINTS and SPECIALTIES

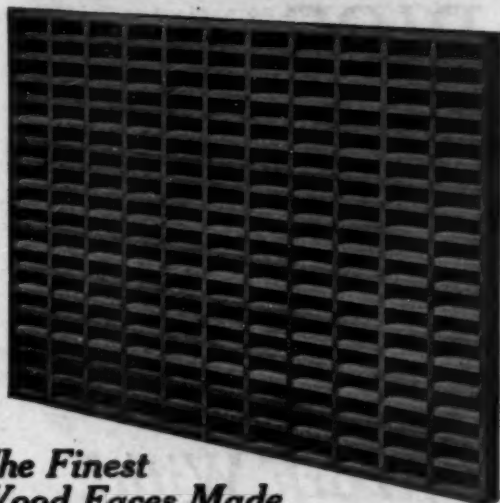
WILLIAM CONNORS PAINT MFG. CO.
TROY NEW YORK

Established 1852

JAMES L. PERKINS
Western Distributor
140 S. Dearborn St., Chicago, Ill.

MARSH

WOOD FACES



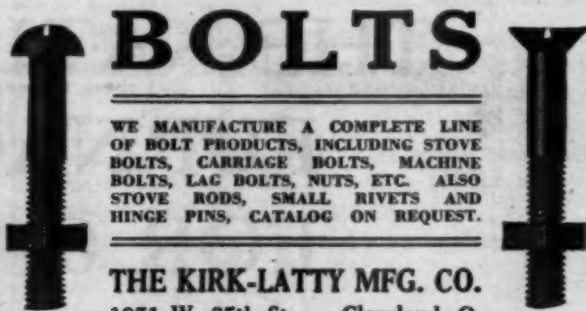
The Finest
Wood Faces Made

EVERY Marsh Wood Face is accurate, durable, artistic, and yet economical.

Highest grade selected lumber from our own forests, superior workmanship and the facilities of a large modern plant are reasons why Marsh Wood Faces are used more than any other.

Order from your jobber. All leading jobbers sell Marsh Wood Faces, or write today to us for our latest catalog and price list.

The Marsh Lumber Co.
DOVER, OHIO



BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS, CATALOG ON REQUEST.

THE KIRK-LATTY MFG. CO.
1971 W. 85th St. Cleveland, O.

IRON AND WOOD
STOVE PATTERNS
QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

PATTERNS
FOR STOVES AND HEATERS
VEDDER PATTERN WORKS
FIRST-CLASS IN WOOD AND IRON
ESTABLISHED 1835 TROY, N. Y.

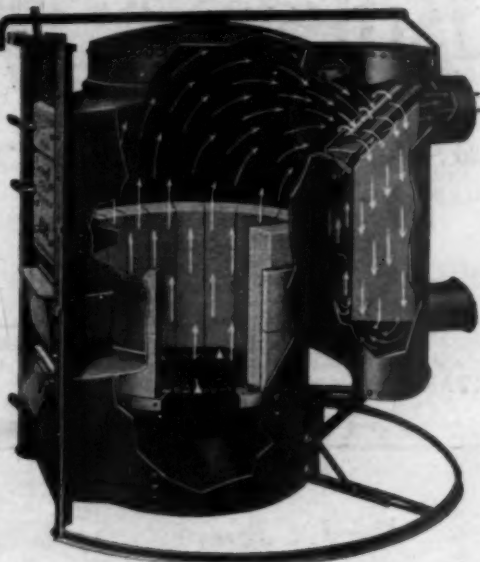
PATTERNS FOR STOVES AND HEATERS
THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

MARSHALLTOWN Steel Furnace

Built on the Central Idea of producing abundant clean heat, economically for a long period of years.

THE Marshalltown Steel Furnace is a substantial furnace devoid of all frills but containing numerous outstanding quality features.

New Lever Shaker Device
Three Flue Crescent Radiator
One Piece Combustion Chamber
Large Capacity Firepot
Door Pouches extending clean through front
Gravity action direct draft damper
Efficient Air Blast
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THE Marshalltown Steel Furnace opens up a real avenue of good business and substantial profits for you.

We want to explain the Marshalltown in detail to you and show you why hundreds of other wide awake dealers are "banking" on the Marshalltown line now.

This furnace will be displayed at the following Conventions: St. Paul, Minn., Feb. 16-19 and Philadelphia, Pa., Feb. 16-19.

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MARSHALLTOWN HEATER COMPANY
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Clean Furnaces This New Quick Way

Try this new method for cleaning furnaces and flues. It's the biggest time and labor saver on the market.

Now, you can clean from five to eight furnaces a day by using the Sturtevant Portable Suction Cleaner, and do a more thorough cleaning job.

By offering this cleaning service, you not only make a reasonable profit on the cleaning but you have an excellent chance to supply extra or new parts for the furnaces if any are needed, also an opportunity to sell new furnaces if the old ones are badly worn.



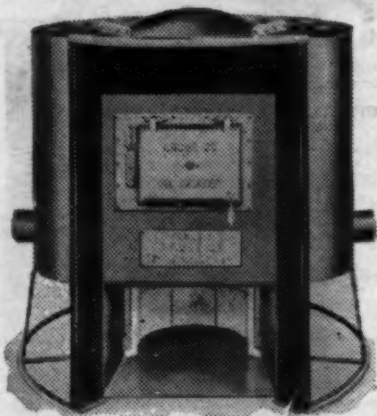
The Sturtevant Portable Suction Cleaner is simply and ruggedly built, has a powerful suction, is easy to handle and can be operated from an ordinary electric light socket.

Don't delay investigating this new way to clean furnaces. Others are successfully using it. Write us NOW for further information on the Sturtevant Portable Suction Cleaner.



HYDE PARK,
BOSTON, MASS.

1478



Years of patient study and scientific research have been spent in perfecting the Kruse furnaces. One reason for the long life and perfect functioning of these furnaces, is the careful welding of all joints.

There are no lapped seams, inside or out, and no exposed inner edges to break down under heat and destroy the efficiency of your furnace.

OUR KRUSE OIL FURNACE IS OF THE SAME CONSTRUCTION, AS OUR STANDARD LINE OF COAL FURNACES, BUT WITH AN INCREASED HEATING SURFACE OWING TO THE TUBULAR RADIATORS SURROUNDING THE FIRE BOX.

A furnace, furnishing clean warm air (free from gas, soot and odor), also more heat from an equal amount of fuel makes a satisfied customer, and is a self advertiser—one furnace installed means more sales in your territory.

KRUSE COMPANY

Welded Steel Furnaces

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The Cleveland Co-operative Stove Co.
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EDITORIAL AND ADVERTISING STAFF

Etta Cohn
J. F. Johnson

G. J. Duerr
Frank McElwain

Eastern Representative: W. C. White, 1478 Broadway, New York City

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AN ACHIEVEMENT

An explanatory note regarding service to readers of AMERICAN ARTISAN. This paper is now nearing the completion of a half century of service. For almost fifty years it has catered to the needs of the men in the industries which it represents. At no time during its long and successful career has AMERICAN ARTISAN been in a better position to render complete, adequate service to its readers than it is today. In addition to the matter contained in our regular weekly publication, we maintain Service Departments for the use of our readers. If you have a problem to solve, we courteously invite you to submit it to us for solution. In what better way can we learn of your problems than from you direct?



Dominate the Heating Field!

THE THATCHER METEOR FURNACE
Dust-Proof—air-tight. Efficient and economical in operation. Burns hard or soft coal.
Easy to install—easier to sell.

THE live dealer who handles the Thatcher Meteor Furnace can easily dominate the heating business in his territory!

In fact, half your battle is now won because the many distinctive features contributing to the supremacy of the THATCHER METEOR have been intelligently and consistently advertised to the very people in your community you want to reach—the architects, the builders and the homeowners.

Write to us, TODAY, and get the whole story of the THATCHER METEOR—our Advertising and Sales plan—and just how we can help you dominate the heating business in your community.

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WHEN you order a shipment of elbows, you want them to arrive cleanly galvanized and perfectly shaped.

That's the way Lupton Elbows come to you—protected from knocks and dirt by specially constructed cartons.

You'll find no dented "misfits" to slow up the job in your order of Lupton Elbows. They're made right, rigidly inspected, and delivered right.

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PHILADELPHIA



LUPTON

ELBOWS THAT FIT

When writing mention AMERICAN ARTISAN—Thank you!



American Artisan and Hardware Record



Vol. 91.

CHICAGO, FEBRUARY 13, 1926.

No. 7.



DISTRIBUTION OF BUILDING IN UNITED STATES BY DISTRICTS, 1925

Copper & Brass Research Survey Indicates 1926 as Year of Great Prosperity

Sees no Reason for Marked Recession in Building During 1926

ALTHOUGH the building shortage in the United States has been largely overcome, there is no reason for a marked recession in building. The tremendous normal growth of the country alone calls for a yearly expenditure of close to five billions of dollars. Ordinary depreciation can be figured at close to three-quarters of a billion dollars.

For 1926 another year of tremendous activity can be expected. Probably \$5,500,000,000 will be spent for new construction, repairs and replacements. Indications are

that the next two years will see some \$10,000,000,000 spent on buildings.

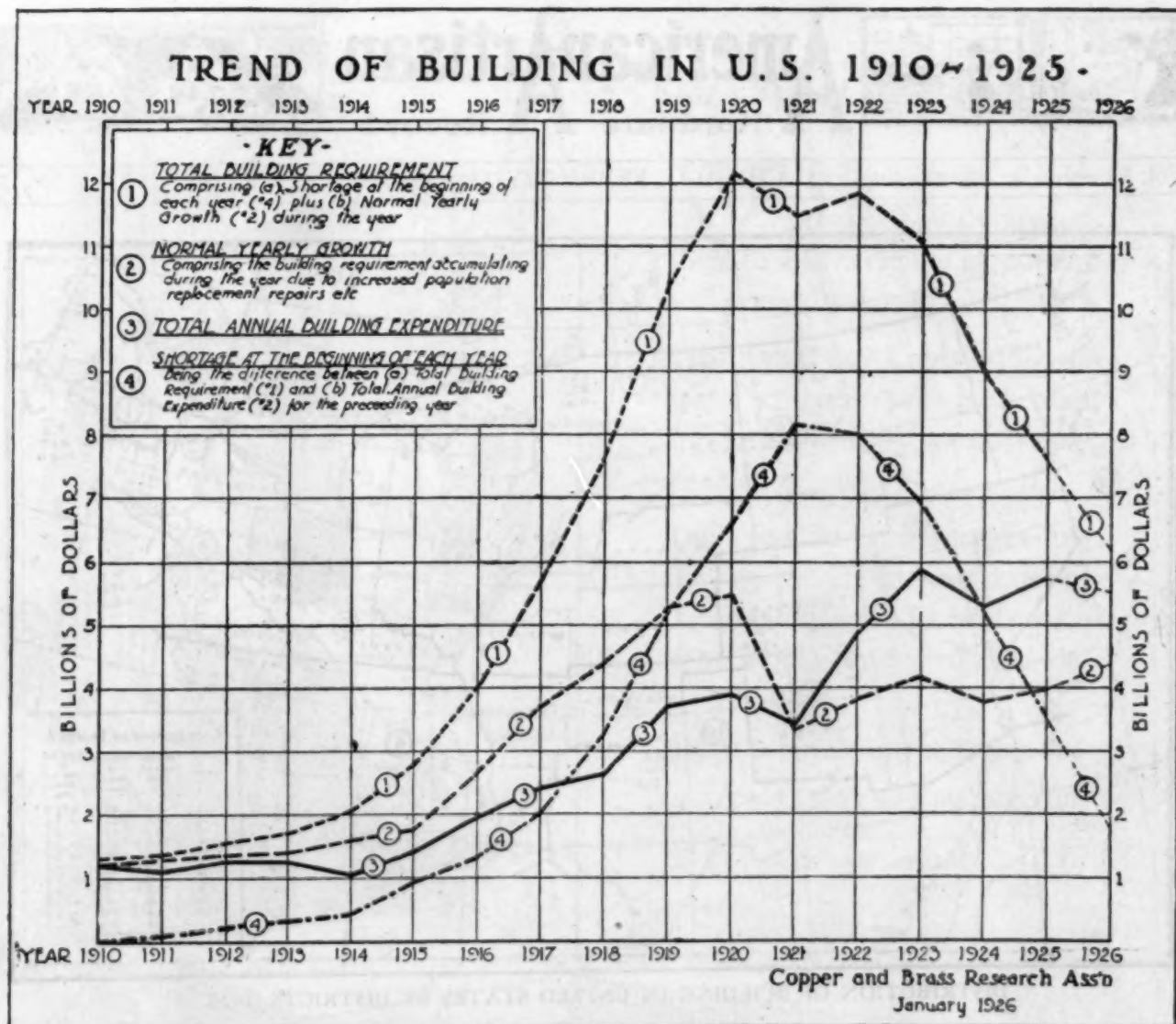
During 1925 the construction industry broke another record with a total volume of \$5,792,000,000. For the third successive year, building in the United States exceeded five billions of dollars. Estimates prepared by the Copper and Brass Research Association show a total construction expenditure of over \$17,000,000,000 for the three years ending December 31st, 1925, as follows:

1923\$5,923,000,000
1924 5,341,000,000
1925 5,792,000,000
	<hr/>
	\$17,056,000,000

The year 1925 almost equaled the record of 1923 when practically \$6,000,000,000 was spent to catch up with the shortage which the war years brought.

Changes in the Trend of Building.

Careful study of all available data and estimates by others set the normal growth of the country's



Showing the Trend of Building in the United States from 1910 to 1925

building at \$4,400,000,000. Of this amount two-and-a-half billions are for some 375,000 new housings to meet increasing population demand. The balance is for the construction that follows as a logical step in the growth of cities and communities, such as schools, churches, stores, hospitals, theatres, etc.

The curves on the accompanying chart show the trend of construction for the past fifteen years and give some index of future. As the shortage (Curve No. 4) is not entirely overcome and the normal growth (Curve No. 2) shows no indication of receding from the present high figures it is apparent that our annual building program for some years to come will approximate \$5,000,000,000.

Yearly Building Requirement.

The actual annual requirement for the country, at its present state of prosperity, can be figured approximately as follows:

	Billions
375,000 housings at 6,400.	\$2.5
Other construction	1.9
Depreciation, repairs, replacements, etc.8
	<hr/> \$5.2

Once the shortage is overcome this will be almost identical with the normal growth. As the value of the dollar fluctuates, definite figures cannot be established for this requirement. It is evident that, at present values, we will have to do some five billions of construction yearly to keep up.

This is a large order, but it is an accomplishment that can be attained if proper methods are employed. for his Mr. Zero souvenir.

Classification of Buildings.

An interesting part of the 1925 construction analysis is the variations shown in the reports of different authorities, who gather their data from different sources. In residential construction this variation is greatest. One authority, estimating probable 1926 construction by classes, places this as low as 33 per cent. Another estimate requires residential construction for 1926 at 83 per cent. Similar variations gives the following distribution of the 1925 construction volume, and the estimated 1926 building program:

Construction Classification.

Type	Per Cent	Amount 1925	Amount 1926
Apartments	14.6	\$ 846,000,000	\$ 803,000,000
Business	13.7	794,000,000	753,500,000
Dwellings	29.2	1,690,000,000	1,606,000,000
Farms	1.5	87,000,000	82,500,000
Hospitals	2.9	168,000,000	159,500,000
Hotels	8.2	475,000,000	451,000,000
Industrial	8.9	515,000,000	489,500,000
Public	2.2	127,500,000	121,000,000
Recreational	5.9	342,000,000	324,500,000
Religious	3.7	214,000,000	203,500,000
Schools	9.2	533,500,000	506,000,000
Totals	100.0	\$5,792,000,000	\$5,500,000,000

Geographical Distribution.

There is general agreement about the geographical distribution of construction. Slight changes have occurred in the percentages of the total construction in the United States.

These are shown in the following tabulation and on the accompanying map.

both as to financing and distribution. There are, of course, centres where there is considerable overbuilding and a certain amount of speculation, but in the main, the great volume for 1925 is an index of strong position and healthy growth. All present indications are for a year of great prosperity in 1926. Let's hope it materializes.

District	Percentages		Loss (—) or Gain for 1924
	1924	1925	
1—New England States	7.0	7.3	0.3
2—New York and Northern New Jersey	26.7	24.9	(—) 1.8
3—Southern New Jersey, Eastern Pennsylvania, Delaware, Maryland, District of Columbia, Virginia....	9.0	8.1	(—) 0.9
4—Southern Coast States, Arkansas, Mississippi, Tennessee	12.2	11.6	(—) 0.6
5—Western Pennsylvania, Ohio, Kentucky, West Virginia	11.4	12.5	1.1
6—Wisconsin, S. Michigan, Indiana, Illinois, Iowa, Missouri, Kansas, Oklahoma	21.3	23.2	1.9
7—North and South Dakota, Northern Michigan, Minnesota	1.8	1.5	(—) 0.3
8—Montana, Idaho, Wyoming	0.7	0.6	(—) 0.1
9—Nevada, Utah, Colorado, Arizona, New Mexico	1.5	1.7	0.2
10—Texas	3.0	3.4	0.4
11—Pacific Coast States	5.4	5.2	(—) 0.2

It should be noted that even when these percentages show a decrease it does not mean that less building was done. In Group 4, southern states, for instance, in 1924, the volume of construction was \$652,000,000. In 1925 the amount was \$672,000,000, an actual increase of 3.1 per cent. The changes in the districts are shown in dollars and percentages in the following table:

Conclusions

The construction industry seems to be organized now on a firm basis

The Districts Numbered in This Table Are Named in the Table Shown Immediately Above.

District	Millions of Dollars		Per Cent of Gain or Loss (—)
	1924	1925	
1	374	422	12.8
2	1,425	1,445	1.4
3	481	470	(—) 2.3
4	652	672	3.1
5	609	724	2.4
6	1,140	1,344	9.2
7	96	87	(—) 9.4
8	37	35	(—) 5.4
9	80	91	13.8
10	159	196	2.3
11	288	306	6.3
Total:	5,341	5,792	

Double-Duty Elbow

Company Perfects New

Time and Space Saving Shear

The Double-Duty Elbow Company, 60 Wilder Street, Aurora, Illinois, have perfected a new Double-Duty brake shear that will be of interest to sheet metal men.

This shear, as described by the makers, is of the hand operated type. Its working parts are exceedingly simple; so simple, in fact, that a boy can operate them without the slightest danger of an accident or injury.

A second feature of the shear is its smooth cutting ability.

The shear when not in use can be folded up out of the way. This is an important factor where the shop is small and consequently requires its owner to economize on space.

Full details regarding a 10-day free trial can be had by writing the company at 60 Wilder Street, Aurora, Illinois.

Fort Wayne Organizes

Sheet Metal and Warm

Air Heating Organization

Again the sledge hammer blow rings the bell! This time it is at Fort Wayne, Indiana. The boys at Fort Wayne have succeeded in organizing what is known as the Fort Wayne Furnace and Sheet Metal Contractors, due to the efforts during the past two years of Charles E. Tharp.

The men of Fort Wayne have held three meetings during the past 15 days. These meetings were prompted by the fact that the city

of Fort Wayne has under consideration a revision of its building code. In order, therefore, to present a solid, unified force in proposing the adoption of the Standard Furnace Code in the new city building code, an organization was effected.

The officers of the newly created organization are as follows: President, J. W. Loney; Secretary, Charles E. Tharp; Treasurer, Jo-

seph Freiburger.

Mr. Tharp is also Treasurer of the Indiana Sheet Metal Contractors' Association and Vice-President of the Indiana Warm Air Heating and Ventilating Association. He is extremely interested in the advancement of the sheet metal and warm air heating industries and his efforts have already borne extraordinarily good results.

Program of Indiana Sheet Metal Convention Full of Good Things

Louisville Local Sending a Delegation to Indianapolis, February 16, 17 and 18

HERE'S a matter of importance for you to consider. At the annual convention of the Indiana Sheet Metal Contractors' Association, to be held at Indianapolis next week, there will be in attendance a delegation of sheet metal men and their wives from the Louisville, Kentucky, local, according to President Joseph E. Mattingly of the Indiana State Association.

That's what Louisville thinks of Indiana. Such friendliness is contagious and you'd better come and expose yourself to it.

The Indiana Sheet Metal Contractors' Association is preparing for one of the biggest and best conventions at the Hotel Severin, Indianapolis, that has ever been held by that organization. The program is replete with good things for all who attend. So get in line.

Here's the program:

**Tuesday, February 16.
Severin Hotel.**

8:00 to 9:30—Registration of all members: Sheet Metal Contractors' Association, Warm Air Heating and Ventilating Association, Indiana Fur-Mets.

10:00—Joint convention, joint program of the three associations. Called to order by President Mattingly.

11:00—Report of officers.

1:30—Report of By-Laws Committee and adoption of new by-laws.

2:30—Address, "Get Behind a

National Campaign," by Edwin L. Seabrook, Secretary, National Association.

3:30—Address by E. A. Scott, New York, "Ethics in Buying and Selling." Questions received for Question Box, in charge of E. A. Scott.

8:00 p. m.—Copper Smelting and Rolling. Exhibit and lecture by courtesy of the Baltimore Copper Smelting and Rolling Co.

9:00 p. m.—Dance and card party, Severin Hotel roof garden, for members and guests of all three associations.

Wednesday, February 17.

Joint meeting of the three associations, in charge of the Indiana Warm Air Heating and Ventilating Association.

9:00—Meeting called to order by President Beaman.

10:30—Address by E. B. Langenberg, President of the National Warm Air Heating and Ventilating Association. Subject, "Present Day Warm Air Heating."

11:30—Address by Guy A. Voorhees. Subject, "Cold Air Shoes."

1:30—Address by Harry Fenton. Subject, "Indiana Laws that Affect the Building Industry."

2:30—F. E. Anderson, Secretary, Indiana Warm Air Heating and Ventilating Association, at blackboard. Figuring code jobs.

3:00—General discussion.

3:30—Nomination and election of officers of the Indiana Warm Air Heating and Ventilating Association.

6:30—Banquet and entertainment for members and guests for all three associations, Severin Hotel roof garden, \$2.00 per plate.

Thursday, February 18.

Joint meeting of the three associations, in charge of the Sheet Metal Contractors' Association of Indiana.

9:00—Reports of committees.

9:45—Question Box, in charge of E. A. Scott; nomination and election of officers of the Sheet Metal Contractors' Association of Indiana.

Adequate provision has been made for the entertainment of the ladies while convention sessions are in progress. Bring your wife and your sister.

Cook County Sheet Metal Club Adds Five New Members

Plans Now Being Made for Membership Drive Dinner

ANOTHER extremely successful meeting was held Friday, February the 5th, by the Cook County Sheet Metal Club.

The feature of the evening was an illustrated lecture on the manufacture of Armco iron. A moving picture machine projected the various processes in the manufacture of the iron upon the screen, while

P. H. Pumphrey, Assistant to Managers of the Development of Armco at Middletown, Ohio.

The lecture and movie were instructive and members who heard and saw were loud in their praise of the evening's entertainment.

A committee consisting of Fred Goodall, J. F. MacNider, Samuel Cripe and President Guenther was

appointed at the previous meeting to undertake the work of mapping out the territory which will include the Branch No. 2 of the club, plans for which are now under consideration.

At the meeting held last Friday night this committee reported that it had formulated a plan to bring those sheet metal men in the territory comprising Branch No. 2 together

at a dinner to be given in the near future. Several meetings of the committee are to be held within the next week or so to make definite plans for the dinner.

Five new members were taken into the Branch No. 1. These are as follows: The Monarch Sheet Metal Works, 2226 West Chicago Avenue; the Desplaines Sheet Metal Works, 1290 Keeney Avenue, Des-

plaines; the Bell Sheet Metal Works, 4871 Milwaukee Avenue; the Portage Park Sheet Metal Works, 5841 Irving Park Boulevard; the Milford Sheet Metal Works, 3517 North Crawford Avenue.

The club now has 51 members and is expanding rapidly.

Get your membership fixed before the new rates come.

Sketch Shows Construction of Pattern for 8-Prong Chimney Top

Such Top Aids Builder in Eliminating Bad Effects of Down Drafts

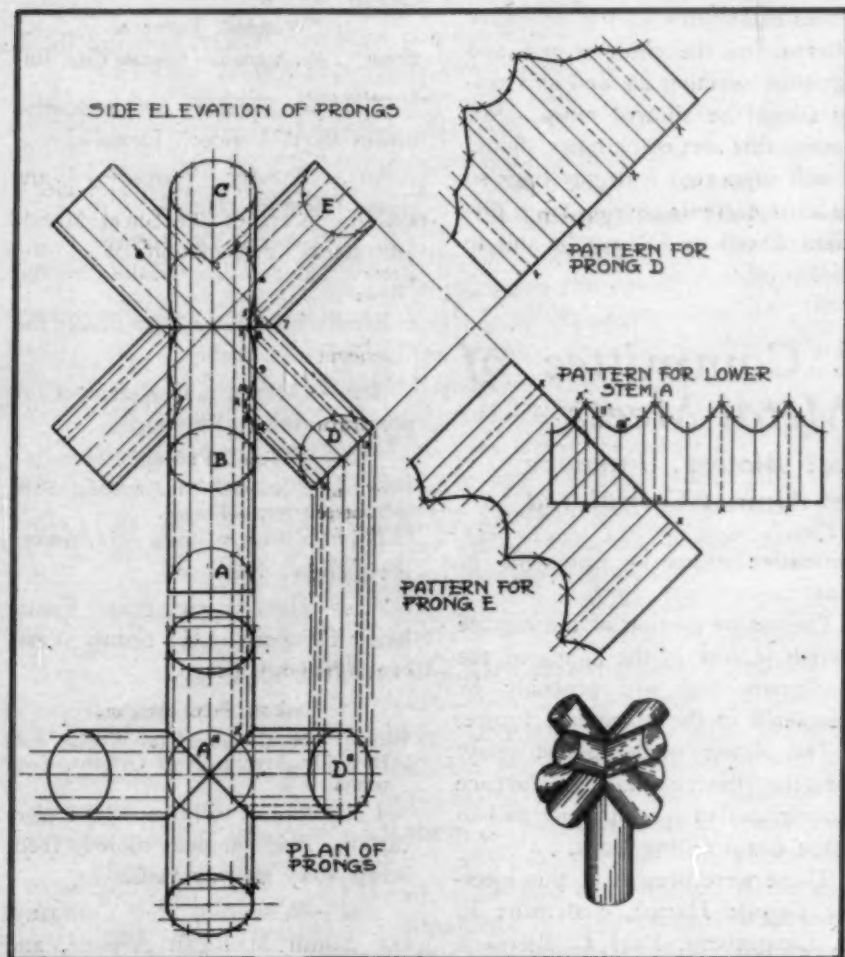
By O. W. KOTHE, Principal, St. Louis Technical Institute, St. Louis, Missouri.

RECENTLY one of our friends, H. P. Duval, sent us a rather novel idea of a chimney top, which we reproduce in the sketch of this drawing. It is made up of eight

different tee connections placed on an incline surrounding the main stem of our stack. This is indeed a very novel arrangement and, except for the top-heaviness, it should

be very effective in the dispelling down-draft. In cities various sorts of chimney tops are tried alongside of tall buildings and even in country towns the grain elevators and other chimneys on store buildings and residences where over-shadowed by tall trees, the air currents are very uncertain. A great volume of air may blow against an obstruction and rebound in a downward direction with sufficient force to cut off the draft and also thrust the smoke in hot gases down the other way.

The condition to overcome is to give full exit to the smoke and hot gases as well as create a condition so the down-draft will spend itself before entering the main pipe. This is possible by the arrangement where the down-draft would flow down the upper prongs and flow out of the lower prongs. It is hardly probable that this arrangement would cut off the flow in the main stem since always one or more prongs would be effective for allowing the smoke and gases to escape. In laying out this fitting we first draw the elevation working from center axis lines by drawing the central stem first. Then we fill in the axis lines for the prongs and next develop the plan view. Next describe section A; A', D and E. With the aid of section D in projecting your lines to intersect the



Pattern for Eight-Prong Chimney

base as well as pass through the elevation and also those from A we can develop the ovals B and C also the plan view oval D". This enables us to get a proper view of the entire problem, and although these ovals and only a part of the plan is necessary, the workman can dispense with such parts after he has become experienced.

Observe that where the lines from the plan section A" intersect with the miter as at X this is the division point, or we may say the meeting point in several positions of the elevation. This point X we project into the oval D" into the two positions and erect to the elevation sections as X = X. From here we carry these lines into the elevation parallel with the axis. Then from the points in section A of elevation erect lines including the X line so that where the intersections are made between the lines of prong E and C as in point 1-2-3-4-5-X. The same also holds good between the prongs D and B as at X-8-9-10-X. Then for the miter between the stem A and each of the lower prongs, the miter is formed as at X-11-12. This miter renews itself 4 times in the circuit of the circumference of the stem as shown in the pattern.

With this miter line established

we can then lay out the pattern by picking the girth for the prong D from section D and setting it off at right angles as shown. Draw stretched out lines and from each point in the miter line carry over lines to intersect those in stretchout of similar number, which gives the intersections for tracing the line as shown. Observe in this pattern we must develop the points X-8-9-10-X-11-12. In setting out the pattern for the prong E we follow the same procedure, but develop from the points in miter line of 1-2-3-4-5-X-6-7. Care must be taken in watching your lines and your points as well as locating the X line in the proper position. When this is done no trouble need be met with. In laying out the stem A we can set off the girth from the section A and then place the -X- points between the positions shown and so carry over the points X-11-12 from elevation, which establishes X"-11"-12" in pattern.

This establishes all the necessary patterns for the chimney top and edges for seaming as well as riveting should be allowed extra. We suppose this sort of chimney should be well supported with guy lines so the wind currents coming from different directions will not be able to twist it off.

dent W. C. Markle, W. A. Fingles, Jr., H. F. Munro, George Thesmacher, J. Henry Teschmacher and Edwin A. Scott.

George L. Bennett of the Sheet Steel Trade Extension Committee also took part in the meeting.



Air Washers.

From Standard Sheet Metal Works, 1405 30th Street, Milwaukee, Wisconsin.

Please advise us who makes air washers.

Ans.—B. F. Sturtevant Company, 410 North Michigan Avenue, Chicago, Illinois; American Blower Company, Detroit, Michigan; Bayley Manufacturing Company, 732 Greenbush Avenue, Milwaukee, Wisconsin, and New York Blower Company, 2246 South Halsted Street, Chicago, Illinois.

"Wonder" Furnace.

From C. W. Signaigo, Granite City, Illinois.

Will you please tell me who makes the "Wonder" furnace?

Ans.—Wonder Furnace Company, Decatur, Illinois.

"General" Oil Burner.

From C. W. Signaigo, Granite City, Illinois.

Kindly inform me who makes the "General" oil burner.

Ans.—General Oil Burner Corporation, Joliet, Illinois.

"Hess" Furnace.

From Jack Stowell, 14 South La Salle Street, Aurora, Illinois.

I should like to know who makes the "Hess" Furnace.

Ans.—Hess Warming and Ventilating Company, 1211 South Western Avenue, Chicago.

Carbon Steel Angles.

From P. H. Cotton Metal Works, 4628 Bienville Avenue, New Orleans, Louisiana.

I should like to know who makes carbon steel angles cooled from scrap steel railway rails.

Ans.—Wisconsin Steel Company, 606 South Michigan Avenue, and Calumet Steel Company, 208 South La Salle Street; both of Chicago.

Trade Development Committee of National Sheet Metal Meets

Major Portion of Cornice, Blower, Furnace Heating Sections of Booklet Almost Completed

EXCELLENT progress has been made in the work of the Trade Development Committee, as was reflected in reports of the various members of that committee when a meeting was held at the Hotel Henry, Pittsburgh, on Thursday, February 4. Almost without exception the members having in charge the various sections of the work were able to present concrete evidence of what has been accomplished, and it was the general consensus of opinion that there will be a most excellent showing when the

committee meets at Louisville in May.

The major portion of the cornice section is now in the hands of the draftsman and will probably be completed in the immediate future.

The blower section is all ready for the draftsman, the furnace heating section is well along and so is the metal ceiling work.

There were present at this meeting George Harms, chairman; E. B. Langenberg, Paul L. Biersach, J. E. Merrick, George I. Ray, Louis Luckhardt, National Presi-

The Editor's Page

Using the Question Box Intelligently

AT THE Wisconsin Sheet Metal Contractors' convention at Milwaukee last week the delegates were treated to an innovation. Here a complete departure from the customary practice at conventions was introduced. Men coming to the meeting with the thought in mind of having a good opportunity to catch up on the sleep they lost the night before were given a refreshing surprise. They faced the possibility of being called upon.

However, there were few, if any, of this type at the meeting. On the other hand, those who formerly had gone to conventions and had come away dissatisfied with the supposed benefits derived were not disappointed this time. They left for their several homes far wiser than they came away from them. This result was due to the intelligent planning of the convention program.

No convention can hope to be a success unless it brings the minds of the delegates in contact. Wise and capable indeed is the man in charge of the proceedings of a convention who can direct the activities in such a way as to unlock the vast storehouses of knowledge that comprise the delegation.

The brain power present is always abundant to solve any problem the industry may have. It remains only for the presiding officer to tap the storage reservoir of knowledge. And tap the reservoir President Jeske did.

The whole secret of the success of the Wisconsin convention is to be found in the intelligent use of the Question Box. The box stood upon the presiding officer's desk. Anyone desiring to do so could quietly step up unobserved just before or after a session and deposit therein the question which he, as an individual, could not himself answer.

His name was not signed, so that when his question came before the assembly in session, he could sit back and listen at ease to the expounding of his problem without the slightest embarrassment—always present in the individual not accustomed to hearing his own voice in a large crowd. Full use was made of this golden opportunity.

As is true in all walks of life, the convention was not without its practical jokers—men who ask foolish and time-wasting questions, such as "Why is a certain brand of product the best for a given purpose?" But fortunately the objects of these men are quickly apparent and their purposes defeated without much loss of time.

You get out of a convention, as you do from a college course, just what you put into it. Therefore, where you have an opportunity to use the Question Box, by all means take full advantage of it. Write

out questions during the year or at least before you leave your home.

Concerning the Moral Right to Enter Business

THE sheet metal contractor is hearing a great deal about "Construction Consciousness." If he is a long established, successful contractor, there is no doubt that he has already felt the influence of this great driving power.

If, on the other hand, he is going in the game with the greater portion of his long row to hoe ahead of him, he may not have fully realized just what responsibilities are accruing to him.

A Construction Consciousness is that perspicacity in the individual which enables him to view as a whole the industry from which he hopes to carve his fortune—be that what it may.

Without a true perspective of the industry in which you are engaged, you will also lack the proper ideals. The importance of your industry in its relation to others will suffer materially.

To get the correct attitude of mind; the sheet metal contractor must at the outset realize that his industry—that is, the building industry—is peculiar to itself. His work is done entirely on the premises of his customer.

Therefore, the fact that he has ideals which he must live up to in his every move must be fully appreciated by him. His work can be no better than his ideals. If his ideals are not of the highest, his work, too, will suffer.

To successfully conduct a sheet metal contracting business requires an exceedingly enormous amount of technical knowledge. Without this special equipment the blind, raging elements themselves will shortly defeat the contractor's purposes. And as his business is that of providing roofs over the heads of others in order to place one over his own, unless he does the task efficiently at all times, he will soon not have that privilege or that opportunity.

On the other hand, if he places roofs over the heads of others and then fails to receive a just compensation for his work, he will discover shortly that he has no roof over his own head.

In addition to the technical knowledge required to run a sheet metal contracting business, there is also necessary a thorough knowledge of business. So that unless a sheet metal contractor has or develops ideals of perfection toward which he works and a thorough business knowledge of his business, he cannot possibly go far. Under such circumstances he has no moral right to engage in the business of sheet metal contracting.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

J. C. Miles of the Warm Air Furnace Fan Company, Cleveland, Ohio, was in Chicago this week. Mr. Miles is the genial gentleman, rather short and stocky of build, who knows just about all there is to know about forced warm air heating. He loves a fight for a worthy cause and is one of the most enthusiastic exponents of the Standard Furnace Code that the warm air heating industry has. When Mr. Miles takes the floor in informal discussion, which he does very frequently at conventions, the other delegates know they are in for it.

* * *

Jack Stowell, Aurora, Illinois, whose motto is "Let Jack Stowell Make It Hot for You," has been laid up for a considerable length of time with a severe cold. He is out on the job now again, however, and is selling more furnaces than ever. I'm certainly glad to learn that he suffered no permanent ill effects from his confinement.

* * *

A communication from Roy C. Walker post-marked St. Petersburg, Florida, has been received this week. Mr. Walker, The Meyer Furnace Company, has had a splendid vacation down in the sunny southland. Whether or not he invested any money down there I am not in a position to say. He is returning via Jacksonville, Florida; Birmingham, Alabama, and Atlanta, Georgia.

* * *

At the recent Wisconsin Sheet Metal Contractors' convention in Milwaukee I saw Otto Geussenhainer. He was looking unusually well and gave a good account of himself during the convention. Among many of the topics upon which he spoke was a definition of service and what it means to the building of a business. Here is what he said:

"One morning a sparrow flew into my back yard. He sat on the fence for a long time and I thought he was hungry. I threw out a piece of bread. He flew down, sampled it and flew away. I waited and soon he came back with another sparrow. They ate the bread and flew away. The next morning there were five sparrows on my back fence. I fed them. That was three weeks ago. A week ago there were so many of them that I had to order an extra loaf of bread. Then I was called out of town for a few days and the birds were not fed. The morning after I came home there were only two in the yard. Even the birds demand good service."

* * *

W. A. Fingles, Jr., Baltimore, Maryland, came in to see me last Saturday morning. Mr. Fingles had been to the trade development committee meeting in Pittsburgh. He came to Chicago immediately thereafter on business. I am very sorry I happened to be out when he came to the office.

* * *

"Excuse me, sir," the waiter reminded C. W. Pansch. "The amount put down in the bill does not include the waiter."

"Why should it?" growled Mr. Pansch. "I didn't eat a waiter."

* * *

"Now remember, Mose," Reinhold Jeske warned his much-banded colored porter, "the very next time you come to work all banged up like this I'm going to fire you. Why don't you stay out of fights?" "Ah'd sho' like to, boss," was the doleful reply, "but Ah ain't got 'nuff money to git me a divo'ce."

* * *

For the benefit and edification of any possible member of the sheet metal and warm air heating fraternity who may consider himself a "lady killer," I am going on record

with a little advice. Of course, I know that those men to whom this does not apply will not consider it as a personal affront. The following story will illustrate:

Old Boxley considered himself a lady-killer, although the ladies seemed unaware of it. He was walking with a friend when they passed a pretty girl. At once he turned to his companion with a superior smile.

"Did you see that charming young lady smile at me?"

"Oh, that's nothing to worry about," replied his friend, consolingly. "The first time I saw you I laughed out loud."

* * *

"Yessuh, I's done proved dat honesty is de best policy after all," said George Washington Johnson.

"How's dat?" demanded his friend.

"You remembers dat dawg what I took? Well, I tries for two days to sell dat dawg and nobody offers me more'n a dollah. So, like an honest man, I goes to dat lady dat owned him and she gives me \$3.50."

* * *

The following classified ad appeared in the For Sale section of a newspaper:

"For Sale—Bull dog. Very fond of children. Will eat anything. 928 North 40th Street."

* * *

"Eliza," said a friend of the family to the old colored washerwoman, "have you seen Miss Edith's fiance?" Eliza pondered for a moment, then bent over the laundry tubs once more. "No, ma'am," she said, "it ain't been in the wash yet."

* * *

S-s-s-simply S-s-s-saying

One of the ushers approached a man who appeared to be annoying those about him.

"Don't you like the show?"

"Yes, indeed!"

"Then why do you persist in hissing the performers?"

"Why, m-man alive. I w-wasn't h-hissing. I w-was s-s-s-simply s-s-s-saying to S-s-s-sammie that the s-s-s-singing is s-s-s-superb."

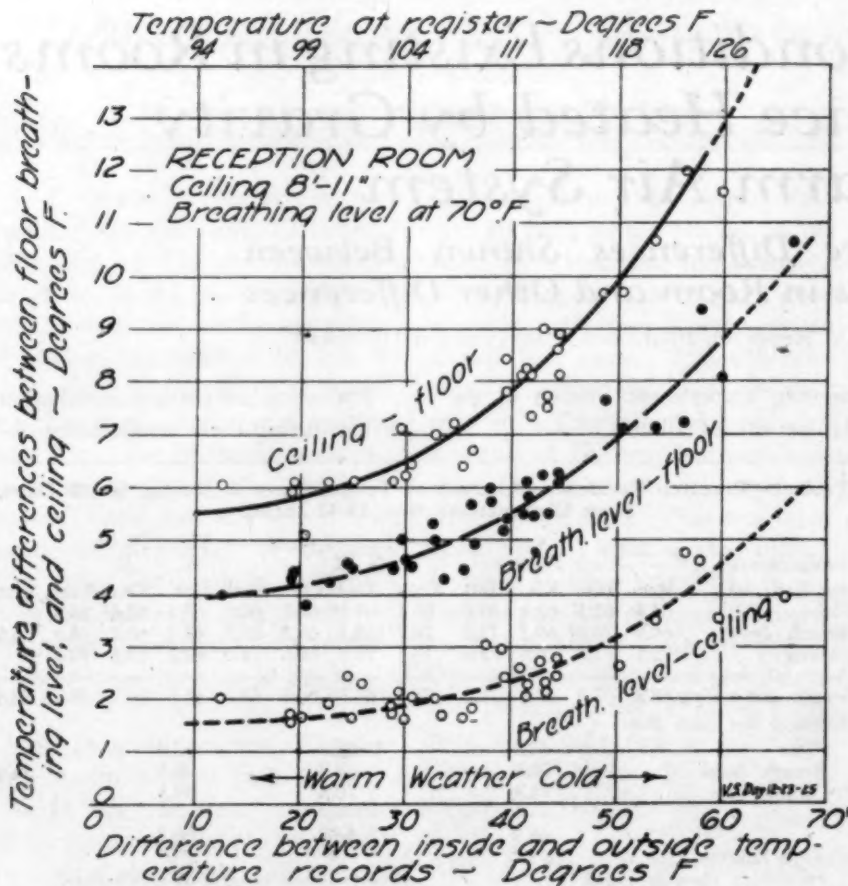


Figure 2—Temperature Differences Between Various Levels in a First Floor Room in the Research Residence

servations has been described in previous papers, but is shown again in Figure 1. As the temperature data undoubtedly will be affected by the arrangement of warm air pipes and return ducts, it is very important that any conclusions drawn take into account the general arrangement of the heating system.

Figure 1 shows that only one cold air grille and return duct was used in the tests under consideration. This grille was located in the central hall of the residence and air from the most remote corners of the house could only return by traveling across floors or down staircases to it. The pipe sizes were calculated according to the Standard Code Regulating the Installation of Warm Air Heating Systems in Residences.

In a central position in each of the ten heated rooms there was located a standard supporting three thermometers—one at the breathing level, another four inches above the floor and a third one four inches below the ceiling. Throughout the

tests a thermostat set at 70 degrees and located in a central point on the first floor controlled the draft door movements. At the same time a recording thermometer graphed the outdoor and the indoor temperatures. The difference between the inside and outside temperatures recorded form the basis for the data plotted in Figures 2, 3, 4 and 5.

In Table 1 temperatures for the entire house are tabulated and averaged. These tabulated data cover a period of 28 days, during which a variety of weather conditions existed. For the period the dry bulb temperature outdoors averaged 36.6 degrees Fahrenheit and the average of the thirty thermometers in the ten heated rooms of the residence was 68.13 degrees Fahrenheit. At the breathing level the average of the ten dry bulb temperatures was 68.9 degrees Fahrenheit. From this average value of 68.9 degrees Fahrenheit the coldest room varied only 2.8 degrees low and the warmest room 2.3 degrees high.

No effort was made to adjust the

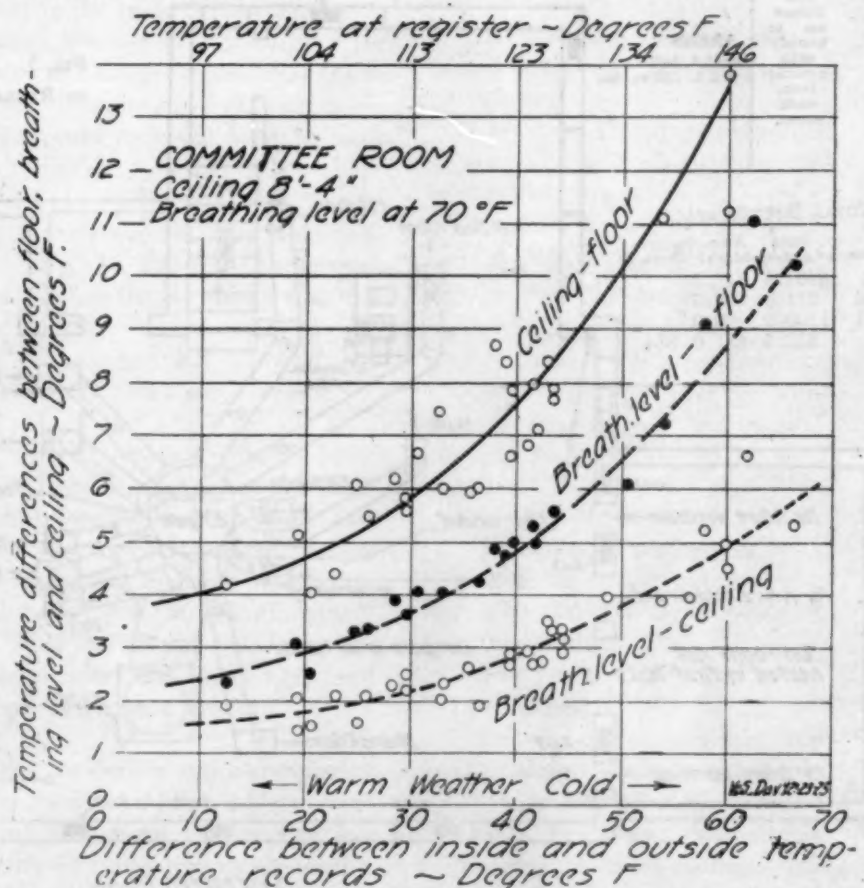


Figure 3—Temperature Differences Between Various Levels in a Second Floor Room in the

room temperatures by manipulation of pipe or register valves. All pipes were full open. Later such adjustment was tried and it was found that by partly closing four of the eleven valves the total range of temperature variations as read on the breathing level thermometers was

readily. Two factors operate to cause the condition, namely, relatively high temperatures of the air which leaves the registers and ascends to the ceiling, and relatively cold temperatures of the air which by infiltration and cooling at the wall surfaces descends to the floor.

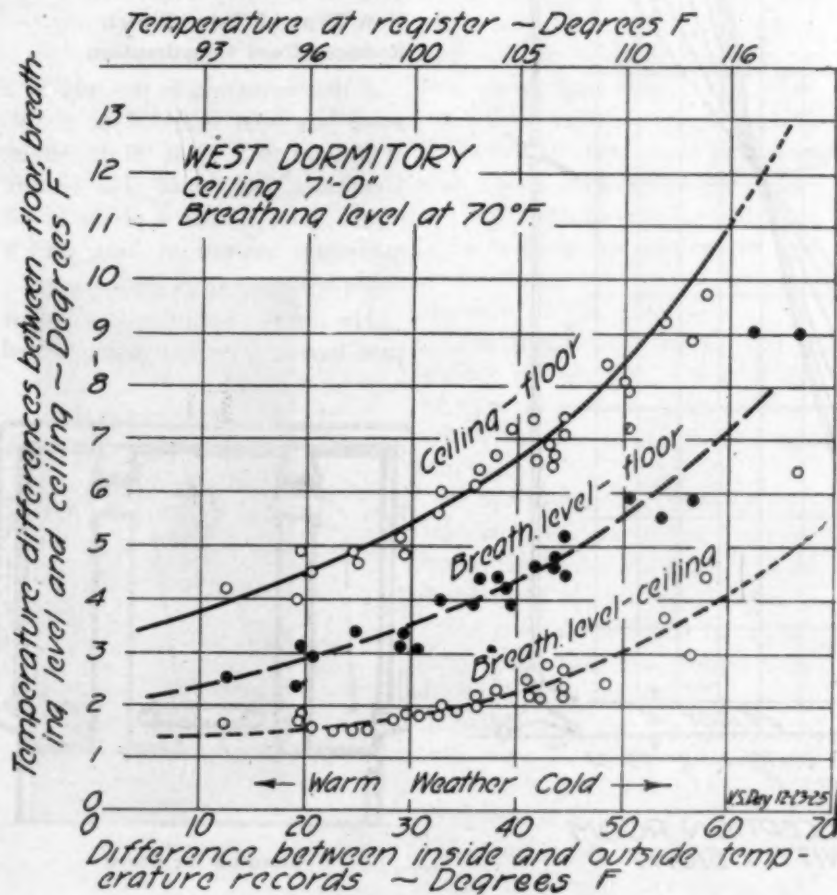


Figure 4—Temperature Differences Between Various Levels in a Third Floor Room in the Research Residence

2.2 degrees or about 1.1 degrees from the mean.

Between different levels in the rooms marked variations in temperature existed. Figures 2, 3 and 4 show graphically the effects obtained in rooms on first, second and third floors, with the indoor-outdoor temperature difference as the basis. The relatively narrow paths in which the experimental points arrange themselves indicate that the temperature differences may be correctly expressed as functions of the indoor-outdoor temperature difference.

The curves turn up rather sharply in the cold weather region, a condition which may be explained

The approximate air temperatures at the registers are shown at the tops of Figures 2, 3 and 4.

In order to further visualize the data contained in Figure 2, another form of charting has been used in Figure 5. Here the three thermometers are shown with the breathing level thermometer always maintained at 70 degrees Fahrenheit. The ceiling and floor temperature may be read directly from the chart for any outdoor temperature. Thus it is shown that in 20-degree weather the floor temperature, in this particular room and installation, was 63 degrees Fahrenheit and the ceiling temperature 73 degrees Fahrenheit. In zero weather the

temperature variation between ceiling and floor might be as great as 17 or 18 degrees,¹ with the floor 12 degrees colder than the breathing level. Figure 4 indicates that the temperature differential used in the calculation of the heat loss from the exposed ceilings of the third floor should have been 76 degrees instead of 70 degrees.

It will be of interest to heating engineers to express the data in terms of temperature differences per foot of height. This has been done in Table 2 and it is shown that the coefficient of temperature increase per foot of height was approximately 2.5 degree zero weather and 1 degree in freezing weather.

In this connection it is interesting to note that Ritshel's equation for

Table 2—Temperature Increase Per Foot of Elevation

Outdoor temp. deg. Fahr. 70 deg. Fahr. inside at breathing line	Temperature increase per foot of elevation		
	1st floor	2nd floor	3rd floor
0.....	2.40	2.52
10.....	1.58	1.89	1.75
20.....	1.21	1.37	1.33
30.....	0.95	1.01	1.04
40.....	0.79	0.76	0.85
50.....	0.70	0.61	0.71
60.....	0.67	0.52	0.60
70.....

the variation in air temperature above or below a breathing line temperature of 70 degrees Fahrenheit in a room 10 feet high and with an outside temperature of zero degree Fahrenheit, gives a correction of about 2 degrees Fahrenheit per foot of height. Practice varies from this figure down to 1 degree Fahrenheit per foot for very high rooms and a common allowance is 2 per cent of the breathing line temperature per foot of height above or below the breathing line. The effect of metal weather strips at all windows and separate air return systems from each room on the variation in air temperatures between floor and ceiling will be determined in later tests in the residence.

The importance of such data as these in computing heat losses

¹No continuous zero weather existed and the tests are being continued for the verification of the accuracy of the curves.

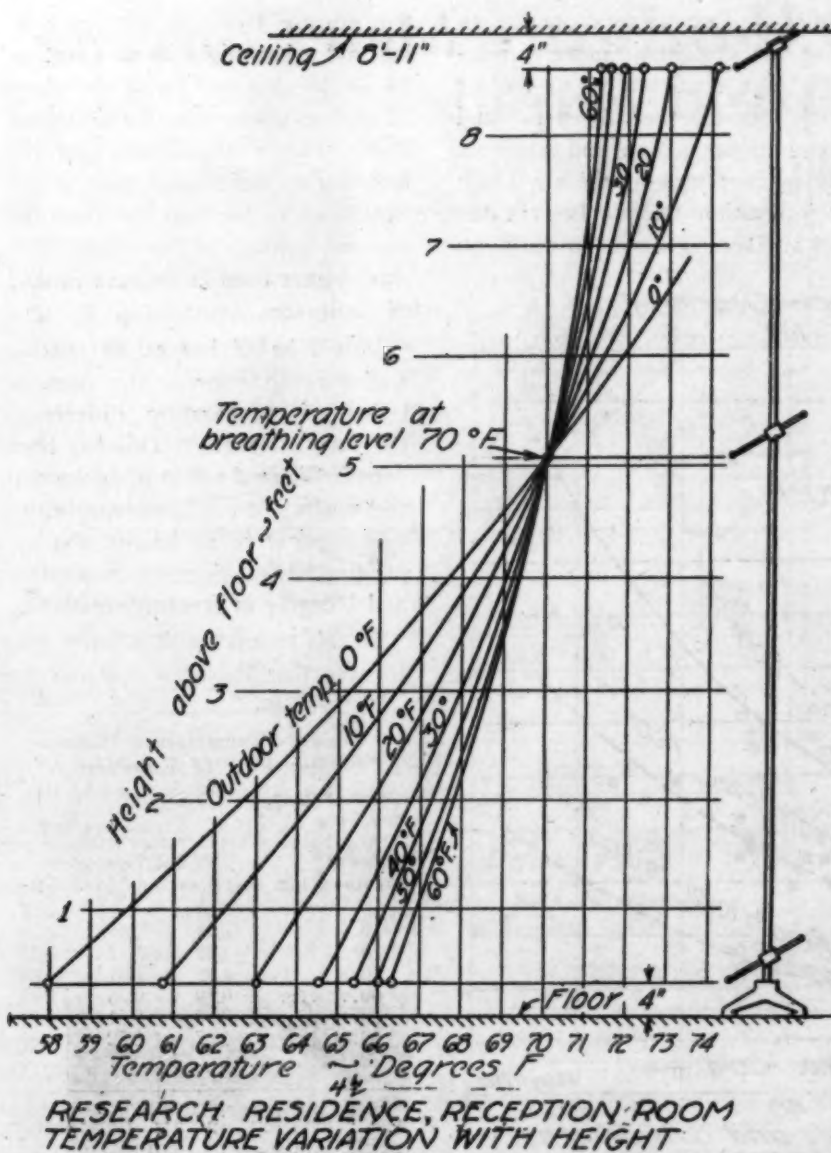


Figure 5. Research Residence, Reception Room Temperature Variation with Height

through cold floors and ceilings can hardly be overestimated and similar records on other types of buildings are greatly needed.

Wants Best Cost Rules for Figuring Warm Air Furnace Job

TO AMERICAN ARTISAN:

What is the best rule known to use in selling warm air furnaces; that is, sending out salesmen with proper kinds of blanks to figure warm air furnaces to be installed. How much is allowed for carting and what percentage is added for selling, etc., and so on?

We find that most every concern has a different rule for their sales-

men. Have you any printed rule which you believe is the rule that works out the best? We would be very glad to have first-hand information on this subject.

Yours truly,
H. E. HESSLER COMPANY.

W. E. Lamneck Company Out with New Attractive Furnace Fittings Catalog

The W. E. Lamneck Company, Columbus, Ohio, has prepared a new catalog on furnace fittings.

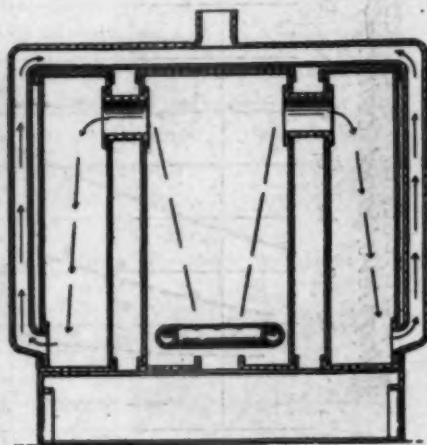
In this catalog will be found all the latest Lamneck perfections and developments. The company manufactures a complete line of furnace fittings, laundry dryers and stove pipe and elbows.

Copies of the new catalog are now available for distribution and will be sent to sheet metal and warm air heating contractors who make requests for them. Write for yours at once.

C. M. Whitman Invents New Type of Stove Which Reduces Fuel Consumption

A new invention in the way of a stove has been invented by C. M. Whitman, 812 West Main street, Henryetta, Oklahoma. The feature of the stove is that it produces the maximum amount of heat with a minimum amount of fuel.

The stove comprises a hollow base having a central casing seated



Showing the Stove

therein and having an opening at its bottom, while outer casings on the base are spaced from the first casing, a coupling connecting the casings together adjacent to their upper ends, while outlet pipes are connected to the lower portions of the outer casings and a burner is arranged in the central casing. The construction permits of a perfect commingling of air with the heat units, and consequently provides for a perfect combustion and a maximum amount of heat with a minimum amount of fuel.

The fuel used is oil and gas. The stove keeps the air in circulation wherever it is used. The principle of the burner can be seen from the accompanying illustration.

Send us your furnace installations.

Michigan Retail Hardware Men Convene at Grand Rapids

Exhibits Best In Years — George W. McCabe Advanced to President

A LARGE attendance and heavy buying characterized the Michigan Retail Hardware Association convention, held at Grand Rapids, Michigan, February 8 to 11, 1926. The sessions were held in the assembly hall of the Pantlind Hotel, President Scott Kendrick, of Flint, presiding.



Scott Kendrick,
Retiring President

Many inspiring addresses were given on subjects and problems of interest and confronting the industry.

Mayor Elvin Swarthout of Grand Rapids and President Scott Kendrick both delivered stirring addresses of welcome.

Inequalities in the public school system and in business were criticized as presenting handicaps to young men by Roy F. Soule, editor of Hardware Dealers magazine, New York, in his address, "Live and Help Live," at the meeting of the Michigan Retail Hardware Association in the Pantlind Hotel Wednesday.

"To say that every boy born in the United States has an equal chance to become president is ridic-

ulous," said Mr. Soule. "As long as we have states controlling education and no national program, as long as we have some states offering a three months' term and usually inadequate equipment compared with states offering longer terms and better equipment, we will continue to handicap children in preparing themselves for the office of president of this country.

"The slogan of business used to be 'live and let live.' Now it has no place in modern codes of business where the slogan is 'live and help to live.'"

R. W. Hatcher of Milledgeville, Georgia, president of the National Retail Hardware Association, told of the work of that organization.

The program provided for an address by I. Moerland, Grand Rapids, on "Group Buying."

Speakers on the Thursday program were T. F. Burton, Detroit, and Robert J. Murray, Honesdale, Pennsylvania.

The report of Secretary Arthur J. Scott of Marine City was as follows:

Annual Report of Secretary Arthur J. Scott

Once more it becomes a pleasure as well as a duty for me to summarize the work of our concentrated efforts during the past year, and the same old thought comes back to me: what a grand and meritorious work this is in which we are all working together for a common purpose.

It is not surprising that we have been able to acquire a degree of strength and prosperity which are proving important factors in helping us to accomplish those purposes for which we were organized.

The record of our association since our last convention shows very gratifying progress in all departments. We have achieved a number of important accomplishments

in the interest of the hardware trade and the membership as a whole has displayed a greater degree of active interest.

You no doubt have all read the association's record as printed in our souvenir program and if you have glanced over the membership figures contained therein you will note that every year since 1908 we have increased our membership over the preceding year and we have gotten to the point where the increases, if any, will be very small from now on, as practically all the representative hardware dealers in the state are now members. Michigan is still in the lead with a good margin and is the largest single state hardware association in the United States.

At the time of our last conven-



George W. McCabe.
President.

tion we reported a membership of 1,731; 128 of these dealers have gone out of business, resigned or their membership has been cancelled for non-payment of dues. Deducting these 126, we have 1,605 of our old members. We have added 130 new members this year, which gives us a total paid up membership at

this time of 1,735, a gain of only four members.

I am very enthusiastic about group meetings. Thirty-two were held during the past year with increased interest and attendance. They feel they are receiving real help and benefit from these round table discussions and from the talks given by Field Secretary Nelson and other officers of the association.

Much interest has been shown in our bargain and information bulletin and many members have disposed of dead and over stocks, and others have made considerable money through taking advantage of the special offers which these bulletins contain.

Field Secretary C. F. Nelson is kept very busy helping members with their store problems. He made personal calls at 1,004 stores during the year.

We gave special information, answering questions of every character pertaining to the conduct of a hardware store, including such information as the sources of supply for new and obsolete merchandise, repairs, etc. This service was given to 411 members.

We helped 59 members with store and stock arrangement.

Gave advertising help to 16 members.

Helped 56 members with the installation of Better Business Records.

Gave legal advice to 29 members.

Made business analysis for 43 members.

Checked books for 16 members and gave other miscellaneous services to members, such as helping them with their Profit and Loss statements, Income Tax reports, etc.

A word about hardware mutual fire insurance would not be amiss at this time in view of the gratifying statements issued at the close of the last fiscal year by our several strong hardware mutual companies. Their statements show large increases in the volume of business, an increase in their assets and a healthy addition to their surpluses. For years these companies have returned from

40 to 50 per cent of the premium which is a large saving in this item of overhead expense.

The Twenty-sixth Annual Congress of the National Retail Hardware Association was held in Philadelphia June 22 to 28 last. The convention theme was: "The Hardware Retailer's Obligation." The addresses and discussions centered around the Hardware Retailer's Ethical Code as adopted by the National and State associations some time ago.

Election of Officers

George W. McCabe, Petoskey, was advanced from vice-president to president as a result of the annual election Thursday in the Pantlind Hotel. Cassius L. Glasgow, Nashville, was elected vice-president. Arthur J. Scott, Marine City,

was re-elected secretary, and William Moore of Detroit was re-elected treasurer. Charles F. Nelson, Marine City, is scheduled for re-appointment as field secretary.

Scott Kendrick of Flint, retiring president, was elected a member of the executive board, as were James Draper of Detroit and W. Bruske of Saginaw, while Warren A. Slack of Bad Axe and Harry C. Waters of Paw Paw were re-elected members.

Exhibits were inspected Thursday afternoon and the annual banquet was to be held in the Coliseum Thursday night. Selection of the convention city for 1927 was scheduled at the closing session Friday afternoon. Sentiment was said to be strongly in favor of returning to Grand Rapids.

Visiting With the Exhibitors at the Michigan Hardware Show

Michigan as Usual Kept Its Record of Going "Over the Top"

By MISS ETTA COHN

ANOTHER successful exhibit can be added to Michigan's long list of successful conventions and it seems hardly fair to omit particular mention of Exhibit Manager K. S. Judson and his efficient wife, as well as Secretary A. J. Scott, to whom due credit must be given.

The Michigan Hardware Convention has always been known to be a real buying convention and 1926 went "over the top" also.

The new blue front furnace in the already complete International line is a winner, so the International Heater Company folks—D. E. McCabe, Les Taylor, L. J. Brien and Charles Hoffman—at the convention said. The boys are all quite enthusiastic over their new vice-president in charge of sales, W. C. Kimball, and are looking forward to wonderful business in 1926.

I understand that T. Reed Mackin took exception to my comment on his personal appearance in my

report of the Indiana convention, but all I can say is I repeat it and mean what I said.

Among the newcomers at the Michigan Show, although by no means new in the State of Michigan were our good friends the Lennox Furnace Company of Marshalltown, Iowa. R. T. Wasson of the home office and H. O. McElwain expressed themselves as pleased with their tryout and 1927 will also find them among those present.

F. Bolds kept pretty busy interviewing Caloric and Monitor friends and prospects as he was alone in the Monitor Furnace Company's exhibit.

The Perfection Stove Company of Cleveland as usual displayed their fine line of oil stoves and it took the combined efforts of the eight company representatives to take care of their dealers. E. R. Porch, district manager, had six of his own men with him—L. E. Buss, J. R. Berg, G. B. Boutwill, C. A.

Dolan, F. A. Nash, J. T. Kotcher—in addition to Fred Gibbs of the Chicago office.

Dee Carney and Glen Burgess were mighty glad to see Dick Judd Thursday when he came up from Dowagiac to assist them in greeting the many friends Premier Furnace Company have made in Michigan. Not a few visitors asked for our friends, Harry Woods and Buck Taylor.

Bill Laffin, Chicago manager of Tuttle & Bailey Manufacturing Company, is a splendid picker of men as is evidenced by the trio of salesmen he had with him. Bill and his salesmen—M. T. Cornwell, L. E. Sampson and J. F. Barclay were, as usual, quite enthusiastic about Michigan.

The popularity of Tee Bee registers in Michigan and throughout this territory is in no small measure due to the personal popularity of the representatives of the company who firmly believe in Tee Bee products and, therefore, can sell them. They make friends of their customers.

C. T. Mullen, president of the Mt. Vernon Furnace & Supply Company, and Tommy Thompson were quite enthusiastic about the new improvements in their line—the ball bearing shaker on their furnace, the flue clean out door and the new coal chute door which are, apparently, all going over big with the trade.

Charlie Glessner and John P. Brooks were the Chicago representatives of Excelsior Steel Furnace who came on to Michigan to help their Michigan representative, R. H. Bristol. The Excelsior folks are all busy and happy, as "business is fine." Incidentally, President A. W. Glessner is in Florida with his family, taking his usual winter vacation.

Another new furnace on display was that of the Marshalltown Heater Company who made their debut in Michigan this year. W. J. Fiala, R. B. Emerson and E. G. Isbey did the honors.

The Fox Furnace Company, as to be expected, had one of the most attractive booths and it seemed that every time I walked by the com-

pany's three live representatives, E. H. Skinner, M. Piggot and J. A. Ruetty, were busy jotting down orders.

Ned Snyder and Gilbert Moore started out the very first morning getting business for Rudy Furnace Company. The big Rudy Giant displayed in their booth was sold immediately to their dealer, Geo. F. Cornell & Son Company for use in the new Nazarene Church at Grand Rapids. They told me all about the wonderful trip President and Mrs. Rudolphi are taking with their daughter, Helen. They have just sailed on the Empress of France for a Mediterranean trip and on their way home will take in London and Paris, taking this opportunity to become personally acquainted with their London distributors who are selling hundreds of Rudy furnaces in Great Britain each year.

Yes, the Gilt Edge furnace people were there—A. G. Pomrening (Pom), Travers Daniels, Jr., and C. J. Heyboer, and they could have used several more salesmen without much trouble as the Schwab Fireside Furnace, as well as the regular line, created quite a bit of interest among the dealers.

The Peninsular Circulator, Warm Air Furnaces and Oak Stoves drew many interested dealers to the booth and E. P. Oviatt and W. E. Wilkerson were more than pleased with the orders taken.

As usual The Ideal Furnace Company of Detroit had quite an attractive display with C. E. Pfaff in charge.

Gus Ruhling and Fred Russell had one of the most attractive tool displays—in fact, they are to be congratulated upon the effective manner in which they displayed V. & B. and Greenlee tools, which companies they represent. Jack Edwards, who represents the Greenlee Company, worked with them in their booth.

One of the most popular of the Michigan salesmen is our good old friend Charlie Nason, who represents Milwaukee Corrugating Company. Charlie this year had with him Fred F. Foster, manager of the

Furnace Pipe Department, and those who know both the boys do not need to stretch their imaginations to picture the always crowded Milcor booth.

Wayne Young of the U. S. Register Company displayed his products in an attractive booth joining that of their jobbers, the W. C. Hopson Company, who featured quite a complete line of sheet metal and warm air heating supplies. The Hopson representatives constantly on the job were J. E. Behler and D. Witmer, although Mr. Hopson himself and Mr. Hazenberg came over occasionally to help out.

A. F. Hem of the Chicago office of the Utica Heater Company is getting to be quite a "convention-goer." He spent practically all week with his salesman, Henry T. Koesel, greeting Michigan dealers and, of course, writing orders.

Although the H. & C. Registers were displayed by his jobbers, Ralph W. Blanchard came up to spend "at least a day," as he put it, saying "Hello!" to Michigan friends.

The American Steel & Wire Company are the souls of hospitality when it comes to conventions. They always manage to have a big booth with plenty of comfortable chairs.

The stove interests—coal, gas, oil and combination—were well represented in the following displays: Albert Lea Foundry Company, Allen Manufacturing Company, Anchor Stove and Range Company, American Gas Machine Company, The Beckwith Company, Coleman Lamp Company, Dangler Stove Company and Quick Meal Range Company (both divisions of the American Stove Company), Elgin Stove and Oven Company, Independent Stove Company, Jungar Stove and Range Company, Majestic Manufacturing Company, Monarch Malleable Iron Range Company, Reps Heater Company.

And last but by no means least attractive was the bindery twine exhibit of the Michigan State Industries, where were exhibited and sold products made in the Michigan Penal Institutions.

Iowa Hardware Men Report Better Business in Spite of Corn Situation

Delegates Spend Time in Open Forum Discussion and Careful Buying

By J. F. JOHNSON

THE twenty-eighth Annual Convention of the Iowa Retail Hardware Association, held February 9, 10, 11 and 12 at Hotel Savery, Des Moines, Iowa, will go down in Iowa history as an outstanding example of the value of association work. The convention was opened Tuesday morning by President W. F. Mueller.

The delegates joined in singing several catchy songs, followed by the famous Iowa Tall Corn song.

Members of the Des Moines Street Railway's Glee Club rendered several numbers, while delegates found seats.

A departure from the proposed program was deemed advisable, the President reserving his annual address for a later session.

The committee in charge of the Question Box Hour consisted of L. C. Abbott in charge, assisted by Herbert P. Sheets and Thomas A. Nichols. Question Number One on this list was singled out for discussion. This question was, "What can be done to bring a return of General Prosperity?" This was admitted by Mr. Abbott to be a rather hard as well as broad question and he called for answers.

The first man up mentioned the Iowa corn situation, and for some time the assemblage heard from many members concerning the quality and condition of corn in their respective communities.

Herbert Sheets was called on to give an answer to this question. Mr. Sheets said that the hardware men must always get down to facts in any case and he presumed that the general prosperity mentioned in this question applied to hardware men in particular. He said that conditions show that the public today is buying more things which tend to give them pleasure. Things that

appeal to the emotions and appetite are more in demand at present than at any past time. "The general prosperity of the hardware retailer will return," he said, "when this condition begins to change. In the meantime the hardware man must face facts as they apply to his individual locality and if he finds his business going backward he must apply means to remedy."

Mr. Sheets cited several cases of dealers who found that, although



President W. F. Mueller.

they had had prosperous business for years, suddenly found themselves in a losing business. One case was easily remedied by cutting expenses in half. Sales in this store had fallen off to a very marked degree, yet the proprietor could not see how he could get along with less help than he had been using for several years. After this dealer had tried every other means of putting his business back unsuccessfully, he cut his help and began to make a profit.

Another retailer who had been firmly established for years in a manufacturing center suddenly found himself without his biggest business. The factories moved and

he failed to realize that his store was no longer in a favorable locality. Instead of realizing that he could not possibly hold this business he struggled to get it, even going to an expense of hiring salesmen. The figures showed that besides a loss of business he was incurring additional sales expense.

Mr. Abbott and Mr. Sheets gave explanations of this campaign, as it seemed a good many dealers did not learn of the campaign until approached by members of the Wallace's farmer staff. It was pointed out by Mr. Sheets as highly desirable in reaching the home town market—the men who are your customers. The matter of copy and its relation to copy of mail order houses was quite thoroughly discussed.

Many of the men stated that they had signed up for this advertising campaign.

Although no one was ready to leave the questions, so much time had been taken that other questions on the list were held for future meetings.

Mr. Herbert P. Sheets was introduced and the subject of his talk was "One-Nine-Two-Five." Mr. Sheets, as Secretary of the National Retail Hardware Association, talked about association work and its results.

In compiling a list of trade evils requested by members, Mr. Sheets stated that he had gone over records for the past quarter of a century. He found, he said, that these records revealed numerous different attempts to solve more numerous trade evils. His conclusion after perusal and study of these records was that many evils are never really eliminated, inasmuch as we find them cropping up again after ten or fifteen years in another form.



Group of Iowa Retail Hardware Men at Des Moines Convention

Installment selling, Mr. Sheets explained, proved to add enormously to the cost of selling. Furthermore, this practice has caused over-selling.

Bankers at first saw big opportunity in instalment business, but this condition is now reversed.

Figures show, Mr. Sheets declared, that 75 or 80 per cent of the population is already obligated beyond its ability to pay, because of too much selling on the installment plan.

During a recent strike, Mr. Sheets pointed out the stores of a certain locality were obliged to extend credit on necessities such as groceries, hardware, etc. When the workers had returned it was found that they kept up the payments on installment-purchased luxuries, while the hardware man and grocer suffered loss.

Another instance of big association work by the retail hardware organization was revealed by Mr. Sheets in connection with the popular taught theory of profit on sales in schools. "It was found," he said, "that out of 110 arithmetics examined 96 of them contained erroneous methods of figuring profit. The association rewrote 450 problems shown in these arithmetics and copies were sent to the publishers and most of them agreed that the association was right. Two publishers have already revised their books.

"They are finding much opposition in having these changes made," he said, "but as it is as much to the public's interest and benefit as well as to the retailer, it will eventually win out.

"It is necessary," he said, "that the

coming generation be correctly informed as to the proper methods of figuring profit and conducting business."

The National Distribution Conferences have brought out the fact that the retailers of the country are the most progressive of all the branches of industry in obtaining data in regard to their business. Also, said Mr. Sheets, it was revealed that the hardware retailers led all other retailers.

"Wholesalers and manufacturers," he said, "were far behind in serving the trade as well as the public in this connection."

As much can not be accomplished working alone in one branch of the industry, it was decided by the board of the National organization to open ways by which the Wholesalers and Manufacturers would work with them.

Mr. Sheets also told about the activities of the National Association Council. This Council committee, said Mr. Sheets, is legislative in a great measure. It has already been heard by law-making bodies on various trade evils.

One of these evils was the practice of manufacturers of some lines of merchandise selling by mail-without orders, the goods being shipped out on a chance that it will be kept and paid for.

Another trade evil on which the Council committee is working for legislation is in the sale of Army and Navy goods not rightfully so named.

Mr. Sheets spoke also of other activities of the National Association and his talk was well received.

President Mueller suggested that a telegram of greeting be sent to

each of the Retail Hardware Associations of Michigan, New York and North Dakota, which Associations are also in convention this week.

It was agreed unanimously by the delegates that this should be done and the matter was left to Secretary A. R. Sale.

Wednesday Morning.

With a gathering considerably larger than present on Tuesday, President Mueller opened the session.

After a few songs, President Mueller gave his annual address.

President W. F. Mueller's Address at Fort Dodge, Iowa, Tuesday, February 9

Once more we have met to shake hands, make new acquaintances and renew the former ones.

It was my good fortune to attend a number of the Iowa group meetings held last fall. Some of the most vexatious questions to come up seemed to center around meeting mail order house, chain and department store competition; direct to consumer selling and numerous premium proposition; buying at right prices, installment selling, extension and handling of credits, reduction of overhead, and more satisfactory returns from our business.

Association Services

Your officials are very glad to report that the Iowa association lost very few if any members due to increasing the dues last year. This increase enabled your association to render the membership greatly increased services. For the first time in our history we were able to put out a field man. Mr. Deering has called on many of you. He is always ready to advise with you on any

question, may it be store arrangement, window dressing, merchandise display, bookkeeping, inspection of insurance policies, etc., etc. Group meetings were held at Ottumwa, Washington, Cedar Rapids, Marshalltown, Calmar and Charles City. The attendance was very good in most places, ranging from thirty-five to sixty.

It is a pity that not more of the members see fit to avail themselves of the services that the Iowa and National office stand ready to give, gladly, for the asking. How many of us know that the home office has a freight auditing service? Those who have used this service have

eral institutions have started this work at different times, but gave it up on account of being too big a job and too expensive.

Following President Mueller's address, Mr. Hugh J. Hughes of Washington, D. C., was introduced and his talk was on "What the St. Lawrence Ship Canal Means to Iowa." Mr. Hughes has spent many years in statistical and research work and his talk was composed of figures and concrete facts regarding the desirability of a direct ocean liner channel from Chicago and Duluth out through the St. Lawrence to Europe.

The question box was next on

doing so.

The question, "Do you think the retailer dealer gets \$10 worth out of this session? What good does this Association do the retailer?" took up most of the rest of the session, and as member after member took the floor it was easily seen that while some men hadn't as yet learned the value of intangible things, most of the members knew full well in dollars and cents why they belonged to the Association and that they were receiving far more value from such membership than the cost of affiliation.

Mr. Abbott cited insurance savings, which he declared alone was sure proof that every member was getting his money's worth.

One dealer located in a moderate-sized town said he would pay as much as \$100 if necessary to obtain the information and sales help that he gets from Association membership. Many dealers voiced appreciation of the group meetings held last year.

"What about the campaign put on by the Wallaces' Farmer?" was asked for again and after a preamble by Mr. Abbott, a short discussion along the lines of the discussion Tuesday followed.

A talk by F. B. Chouinard, "Merchandising Electrified Hardware," followed. Mr. Chouinard pointed out the desirability of the hardware dealer selling electrified hardware because of the fact that electrified articles eliminated the non-electric article, and many of these later were formerly standard merchandise in hardware stores.

The Thursday and Friday sessions were carried out as per program.

Adequate provision was made for the entertainment of the ladies, who were present in large numbers.

Report of Secretary A. R. Sale

The units of moving force in any co-operative institution are the members. If half the units push ahead, the other half pull back—it stands still. Progress or decadence is measured by the impulse of the units composing the body.

The officers of the organization



H. F. Leibsle, A. R. Sale, W. F. Mueller, Albert Bojens, E. M. Healey, Frank Slaboch and T. A. Nichols

usually been reimbursed to quite an extent in refunded overcharges. The monthly exchange sheets move thousands of dollars worth of dead merchandise each month. The sales talks sent us the past eighteen months were gotten up at considerable expense and their value cannot be estimated from an educational standpoint.

Our national office is one to be proud of. Without a doubt, it is the largest and best of its kind in our country. Even our government sends its officials there for information or has Mr. Sheets and his helpers come to Washington. This entire office with its corps of workers are at your service.

Their research work in connection with the hardware business is a big work in itself. It is worth more than your membership fee alone—provided you use it. Sev-

the program and L. C. Abbott, G. A. Knutson and George Healey formed the committee in charge. "Why should dealers deliver implements free?" was asked.

A short discussion of this question brought out the fact that conditions and localities governed the action of dealers in charging or not charging for delivery.

One dealer said that while he did not sell implements, he delivered large articles free up to as far as 50 miles. He said on stoves he found that he could do this using only one man, the driver of the truck. He saved the expense of another man by securing the services of the customer in helping to unload and he said that he was able to do this in return for free delivery.

Another dealer said he always charged for delivery service and believed he did not lose business by

can but point the way, blaze the trail, smooth out the ruts and steer the machine. The impulse, the force, the power lies with its members. Co-operation is the unified force of all the units acting in unison.

The tendency in human affairs is to self satisfaction and complacency in success, while calmly ignoring the steps by which we have attained, leaving to ambitious contemporaries



C. B. Hill and Karl L. Knight

the further promotion of our objectives.

Our field surveys for the past three years covering 1,048 inspections made by our fieldmen show that our insurance department might well double its holdings among our own people.

As taken from the books of the members, the insurance is as follows:

	Per cent	
Iowa Hardware Mutual.	.54+	\$5,244,000
Other Hardware Mutuals.	.10+	\$1,100,000
Stock Companies	.33+	\$3,340,000
Total	.97+	\$9,684,000

In other words, we are about half way co-operative in our insurance patronage.

We can readily understand the 10 per cent to Other Hardware Mutuals, but the sloughing off the 33 per cent to stock companies and the forfeiting of \$35,000 in cool cash

savings shows that a little more intensive co-operation would be a good thing for the company and a still better one for the individuals who are responsible for this record.

We might multiply comments on this to show how this would increase our insurance department's assets, the volume of insurance in force, the reduction in overhead, increase in surplus without going outside of our own ranks and with very little additional expense.

Installment Selling

One of the most spicy and interesting discussions that ever enlivened the sessions of the National Hardware Convention occurred at the last meeting in Philadelphia on the subject of Installment Selling.

Ever since that historic debate the columns of the Hardware Retailer have reverberated with the echoes of the discussion. Every trade journal in the country has played up leading editorials for or against the system and still the merry war goes on.

Meanwhile the buying public is coaxed and persuaded to purchase necessities, luxuries and automobiles by the "dollar down" plan, leaving the learned doctors of finance to figure out how much interest they really pay and just when the period of broken credit will arrive.

Last year the American public spent \$160 per family for goods on the easy payment plan. This makes a total of four billion dollars. But what share of this does the hardware store get? The department store, the furniture store, the specialty shops, the public utility people, all selling hardware, are doing the business.

Doubtless the people have overbought on automobiles and are now going wild on radios, yet the savings banks are still piling up their billions, having grown from six billions in 1920 to nine billions in 1925. This does not indicate that the country is going broke on buying on the easy-pay plan.

Secretaries' Conference

The Secretaries' Conference of 1925 was called to meet at the Na-

tional Office in Indianapolis, September 29-October 2.

Of all the association functions, that is probably the most business-like, with the least frills and side issues of any of the numerous hardware meetings of the year.

Specimen topics: Accounting, Collective-buying, Maintaining Active Interest, Group Meetings, Making Conventions Pay, Analysis of Business Statements (submitted for study), Efficient Field Service, Financing an Association, etc.

On each topic there is a leader who prepares a paper which is submitted for publication after it has been submitted to the none too gentle criticisms of the secretarial body.

The topic assigned to your representative in the Conference was "The Problem of Active Interest." That is, how to persuade you mem-



J. B. Crew, E. M. Healey and Herbert P. Sheets

bers to be constantly alive to the work of the association.

Group Meetings

During the past season group meetings were held at the following places:

Ottumwa	September 9
Washington	September 10
Cedar Rapids	September 23
Marshalltown	September 24
Calmar	October 28
Charles City	October 29

What and Who Were Seen at the Des Moines, Iowa, Show

Every Inch of Space Employed at Coliseum With Interesting Hardware Exhibits

ONE of the first and biggest booths at the Iowa Hardware Exhibit was the Lennox Furnace Company stronghold. The famous Type E and the big Heavy Duty furnaces were displayed. Fred Hynds, Treasurer and Secretary, was in charge, and Ed. W. Hunter, R. E. Pauley and F. J. Kiesch were also on the job. The long line of coats running from one end of the booth clear across to the other end showed that many retailers were making the Torrid Zone booth their headquarters.

Viewing a half section of a Cabinet Heater is something new yet and this interesting method of showing the inner construction of the Sunbeam Cabinet Heater stopped many dealers at the Fox Furnace Company booth. W. R. Cameron, who was in charge, also kept busy showing the Sunbeam cast furnace and the new Sunbeam steel furnace. Mr. Cameron had many requests for his Mr. Zero souvenir, the man with a thousand funny faces.

Joe Burgess came on from Rock Island and was busy showing his Iowa friends the Rock Island No-Streak, Vol-Yum and Out-O-Wall registers. S. E. McLaughlin and J. H. Roebel were in his booth, giving him a lift on sales.

Wood faces artistically fitted together formed the railing of the U. S. Register Company booth, where H. J. Somers, Branch Manager, was in charge. Mr. Somers and O. D. Stansberry had an unusual number of guests seeking the rare souvenir which they passed out. This was a combination key ring, cork screw and bottle opener. Their full line of Jones National, National Capital and National Registers attracted attention also along with their display of furnace pipe and fittings.

Moore Brothers, Joliet, Illinois, were there, too, and they had a well-arranged booth showing their gas ranges, encased heaters No. 17, coal

ranges and 3-way heater. Ed. Marsh was in charge and J. A. Carey, Sales Manager, was busy helping him out.

Wherever opportunity knocks you'll find the Milwaukee Corrugating Company on the job. Here they had an opportunity to show their line to a good number of friends and they fixed an attractive booth, displaying their complete line of sheet metal products. P. E. Sauerwein was in charge and he had Edson Perry and J. R. Morgansen helping him pass out Milcor pure Havana cigars.

Iowa uses a lot of wire fence and a lot of it is made by the American Steel and Wire Company, of Chicago. L. J. Brown was in charge of this company's booth, which contained displays of American fence, posts and gates, and he had this large and able staff with him: C. L. Tite, A. J. Weir, Lee Ingalls, H. B. Chandler and A. L. Hinrichsen.

A new feature was shown by the Des Moines Stove Repair Company in their booth. This was a furnace pot with extra large upper cup joints which will fit expanded domes and feed sections for all makes of furnaces. J. B. Green was looking after sales in this booth and S. C. Green, A. H. Erickson and H. B. Weaver were taking care of their many customers.

An arch built up of Knox Everlasting Cast Iron Smoke Pipe drew attention to the space occupied by the Waterloo Register Company of Waterloo, Iowa. Mr. Oltrogge, Secretary and Treasurer, did the honors here and he showed the new Standard Register and cast basement window also.

P. S. Keith, President of the Keith Furnace Company, Des Moines, one of the oldest and best known men in the furnace industry, spent much time at his booth showing the Keith Monitor furnace. B. R. Pranke, Jim Short and Irving

Rohr visited with many of their out-of-town friends.

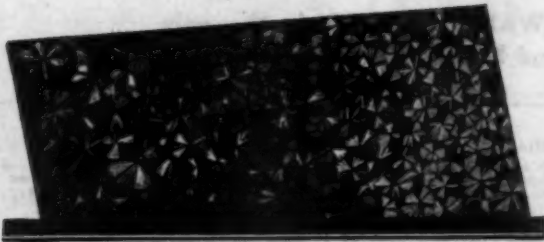
The boys at Mt. Vernon, Illinois, who make the Vernois line of warm air furnaces, tank heaters, laundry stoves, coal chutes and Ward furnaces, were there, too, displaying all these products in an attractive booth. Carl Schweinfurth, General Manager, and C. T. Mulioy, Vice-President, were on hand to talk to the visitors.

W. C. Koenneman and his well-liked, industrious Sales Manager, E. C. "Buck" Taylor from Dowagiac, were busy at their special private showing at the Savery Hotel. They were, of course, displaying that New Premier De Luxe furnace they have been talking about lately.

J. C. Mobley, the Success Heater Manufacturing Company, Des Moines, Iowa, thought it would be most interesting for his friends to come right over to the plant where they could see a great deal more than he could show them in a booth. It was "at home" week for the Success family, as a host of friends accepted the invitation to call.

The boys who were "at home" in Des Moines were out of their booths as much as in them, taking their friends to their places of business and making them feel at home, too. Blair Quick, Quick Furnace and Supply Company, was one of these busy boys. The Quick booth was in charge of B. H. Quick and besides Blair, A. B. Meston, Louis Roos and C. F. Anderson took care of many visitors. The senior Mr. Quick, one of the well-known and well-liked old-timers, had his grandson, Benjamin, helping him pass out souvenir pencils.

In the Quick booth we found R. Lowell Sanders, the youngest hardware dealer at the convention. Young Sanders is just nineteen. He graduated from high school in 1924, opened his store and showed a good profit for 1925. He operates two stores, one at Plainfield, Iowa, and the other at Tripolis, Iowa, with another young man, Collin Frank, in charge. Both stores are run under the name of Standard Hardware Company.



The mark of superior quality on Galvanized Steel Sheets

INLAND "TEC" Master Brand Sheets

Inland "TEC" Master Brand sheets are now available. The Master Brand mark signifies that the sheets bearing it have been manufactured under the exacting specification of the Trade Extension Committee and are subject to constant inspection and test. Inland Master Brand sheets carry a double assurance of uniform quality; each sheet also carries the Inland brand mark.

INLAND STEEL COMPANY

General Offices: 38 South Dearborn Street, Chicago
Mills: Indiana Harbor, Ind., Chicago Heights, Ill., Milwaukee, Wis.

Branch Offices and Representatives

St. Paul Seattle St. Louis San Francisco Salt Lake City
Milwaukee Kansas City New Orleans Los Angeles

A Dual Message about Barnes Elbows



To the Jobber:

When figuring your 1926 elbow contracts be sure to have the Barnes proposition before you.

Barnes Elbows are better made, better formed and better fitting than any other elbow on the market. They make satisfied customers and that means repeat business. The outside locked seam, an exclusive Barnes feature, makes a stronger, cleaner elbow that will last longer.

The Sheet Metal Contractor likes Barnes Elbows because he has no trouble with them on the job—they fit.

Get the Barnes proposition on Elbows, Eaves Trough, Conductor and Fittings if better products, larger profits and prompt delivery mean anything to you.



The Barnes Locked Seam cannot come apart.

Send for free sample elbow and catalog of Barnes products.
Sold only through sheet metal jobbers.

To the Sheet Metal Contractor:

Elbows that you can depend on for perfect form and fit—no trouble to erect them on the job—Barnes Locked Seam Elbows.

Made on automatic machinery—every elbow alike—the locked seam on the outside for added strength.

Barnes Elbows—Eaves Trough and Conductor also—are made of Armco Ingot Iron, Toncan Iron, Keystone Copper Bearing, Steel (hot galvanized after manufacture), Zinc and Copper—all standard gauges and sizes.

Every Barnes Elbow bears our trademark together with the size, gauge, angle and material from which the elbow is made—this is quality insurance and your protection.

BARNES ZINC PRODUCTS CO.

902 Blackhawk Street

CHICAGO, ILLINOIS

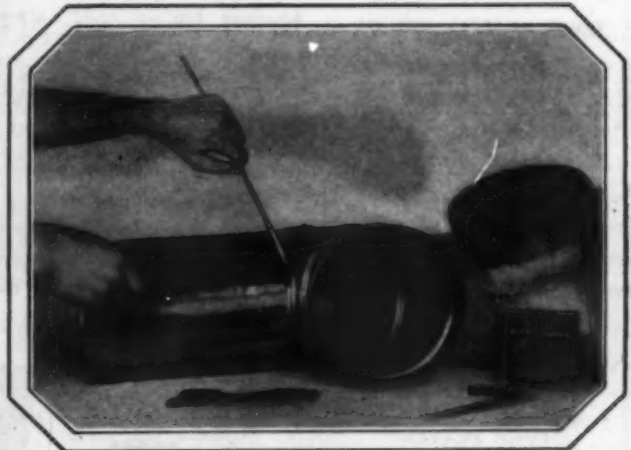
KESTER SOLDER

Self-Fluxing



(Underwriters' Laboratories Inspected)

"Requires Only Heat"

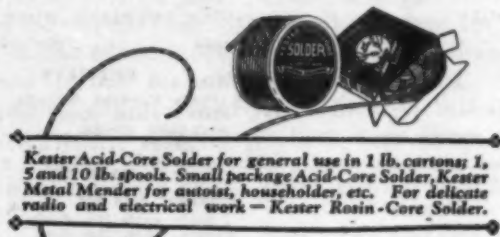


On New Work

ON NEW WORK where time saved on the job means a better profit, the wise tinner uses Kester Solder. Soldering time is a big item in the sheet-metal world and a saving of one-third on this item should be welcomed by everyone.

Common solder needs three operations (solder—flux—heat). Kester only two, because it "requires only heat." Kester supplies its own scientific flux from tiny pockets inside itself as it is used.

That's why you save one-third of your soldering time with Kester. Increase your net profit by using Kester Solder from now on.



Manufactured by the
CHICAGO SOLDER COMPANY
4241 Wrightwood Ave.
CHICAGO, U. S. A.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Foundry	\$23 00
Southern Fdy., No. 2 27 01	28 01
Lake Superior Charcoal....	29 04
Malleable	23 00

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets...	\$27 00
IX 20x28, 40-lb. "	29 90
IXX 20x28 56 sheets...	16 20
IXXX 20x28	17 20
IXXXX 20x28	18 40

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 10
IX 20x28, 40-lb. "	28 00
IX 20x28, 30-lb. "	21 30
IX 20x28, 30-lb. "	24 20
IX 20x28, 25-lb. "	20 30
IX 20x28, 25-lb. "	23 20
IC 20x28, 20-lb. "	17 80
IV 20x28, 20-lb. "	20 65
IC 20x28, 15-lb. "	16 55
IC 20x28, 12-lb. "	15 25
IC 20x28, 8-lb. "	13 55

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including,	
1/4 in.—100 lbs.	4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28.	\$12 70
Cokes, 90 lbs., base, 20x28.	12 95
Cokes, 100 lbs., base, 20x28.	13 25
Cokes, 107 lbs., base, 1c	
20x28	13 60
Cokes, 135 lbs., base, IX	
20x28	15 40
Cokes, 155 lbs., base, 56	
sheets	8 80
Cokes, 175 lbs., base, 56	
sheets	9 70
Cokes, 195 lbs., base, 56	
sheets	10 65

BLUE ANNEALED SHEETS

Base 16 ga.per 100 lbs.	\$2 80
"Armco" 16 ga.per 100 lbs.	4 00

ONE PASS COLD ROLLED BLACK

No. 18-20.per 100 lbs.	\$3 80
No. 22-24.per 100 lbs.	3 85
No. 26.per 100 lbs.	3 90
No. 27.per 100 lbs.	3 95
No. 28.per 100 lbs.	4 10
No. 29.per 100 lbs.	4 10

GALVANIZED

"Armco" 28.per 100 lbs.	\$6 70
No. 16.per 100 lbs.	4 50
No. 18-20.per 100 lbs.	4 65
No. 22-24.per 100 lbs.	4 80
No. 26.per 100 lbs.	4 95
No. 27.per 100 lbs.	5 10
No. 28.per 100 lbs.	5 25
No. 30.per 100 lbs.	6 75

BAR SOLDER

Warranted	
50-50	per 100 lbs. 40 75
Commercial	
45-55	per 100 lbs. 38 25
Plumbers	per 100 lbs. 35 75

ZINC

In Slabs	3 75
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SHEET ZINC

Cask Lots (600 lbs.)	14 00
Sheet Lots	15 00

BRASS

Sheets, Chicago base.	19 1/4 c
Mill base	19 1/4 c
Tubing, brazed base.	27 1/2 c
Wire, base	19 1/4 c
Rods, base	17 1/4 c

COPPER

Sheets, Chicago base.	22 1/2 c
Mill base	22 1/2 c
Tubing, seamless base.	25 1/2 c
Wire No. 9 & 10, B. & S. Ga.	
.....	20 1/2 c
Wire No. 11, B. & S. Ga.	20 1/2 c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

LEAD

American Pig	\$10 80
Bar	11 80
Sheet	
Full Coilsper 100 lbs.	14 00
Cut Coilsper 100 lbs.	14 25

TIN

Pig Tin	per 100 lbs. 70 50
Bar Tin	per 100 lbs. 71 50

ASBESTOS

Paper up to 1/16	6c per lb.
Roll board	6 1/4 c per lb.
Mill board 3/32 to 1/4	6c per lb.
Corrugated Paper (250	
sp. ft. to roll)	\$6.00 per roll

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each	\$0 35
Flue Cleaning	
Steel Only, each	1 25

BURRS

Coppers Burrs only	45%
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CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 50-lb. cans, net	90
American Seal, 25-lb. cans, net	3 00
Asbestos, 5-lb. cans, net....	45
Pecora	per 100 lbs. 7 51

CHIMNEY TOPS

Iwan's Complete Rev. &	
Vent	30%
Iwan's Iron Mountain only.	35%
Standard	30 to 40%

CLINKER TONGS

Front Rank, each.	\$ 75
Per doz.	8 40

CLIPS

Damper	
Acme, with tall pieces,	
per doz.	\$1 25
Non Rivet tall pieces,	
per doz.	25

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier.per lb.	40c
2 1/2 lb.per lb.	45c
2 lb.per lb.	48c
1 1/2 lb.per lb.	55c
1 lb.per lb.	60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.	Net

COUPLING HOSE

Brass	per doz. \$2 20
-------------	-----------------

CUT-OFFS

Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
standard gauge	40%
26 gauge	30%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.	\$1 75
8 inch, each 25c, doz.	2 40
9 inch, each 30c, doz.	2 75
10 inch, each 32c, doz.	3 00

Smoke Pipe

7 inch, each.	\$ 35
8 inch, each.	40
9 inch, each.	50
10 inch, each.	60
12 inch, each.	90

Reversible Check

8 inch, each.	\$1 50
9 inch, each.	1 70

DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle.per doz.	\$14 00
7-ft. Handle.per doz.	26 00
Iwan's Hercules pattern,	
per doz.	14 90

EAVES TROUGH

Galv. Crimpedge, crated.	75 & 5%
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ELBOWS

Conductor Pipe Milcor.	
Galv., plain or corrugated,	
round flat Crimp.	
Std. Gauge	65%
28 Gauge	55%
26 Gauge	40%
24 Gauge	10%

Square Corrugated

Standard Gauge	50%
26 Gauge	30%

Forties Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.	
Not nested	70 & 5%
Nested solid	70 & 5%

ELBOWS—Steel Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 gauge.	Des.
5-inch	\$1 15
6-inch	1 25
7-inch	1 75

Special Corrugated

6-inch	\$1 35
7-inch	1 65

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue.	
5-inch	\$1.65
6-inch	1 75
7-inch	2 40

WOOD FACES—50% off list.

FENCE

724-6-12% (100 rods)	\$29 02
1948-6-14% (100 rods)	44 08

FILES AND RASPS

Heller's (American)	50-10%
American	50-10%
Arcade	50%
Black Diamond	40-10-5%
Eagle	50%
Great Western	50%
Kearney & Foot.	50%
McClellan	50%
Nicholson	50%
Simonds	60%

FIRE POTS

Ashton Mfg. Co.	
Complete line	
Fire pots and Torches.	52%

Otto Berns Co.

No. 1 Furn. Gasolene with	
large shield, 1 gal.	\$ 75
No. B Furn. Kerosene, 1	
ga.	15 12
No. 10 Brazier, Kerosene	
or Gasolene, 10 gals.	47 52
No. 5 Torch, Gasolene or	
Kerosene, 1 pt.	7 92
No. 33 Torch, Gasolene, 1	
quart	5 40
No. 36 Torch, Gasolene, 1	
pint	4 05

Clayton & Lambert's

East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Ne-	
braska, Kansas, Oklahoma, Ar-	
izona, San Angelo and Laredo,	
Texas	52%
West of above boundary line	
.....	48%

Geo. W. Diemer Mfg. Co.

No. 62 Gasolene Torch, 1	
qt.	\$ 5 50
No. 6350, Kerosene, or	
Gasolene Torch, 1 qt.	7 50
No. 19 Tinner's Furn.	
Square tank, 1 gal.	12 00
No. 15 Tinner's Furn.	
Round tank, 1 gal.	12 00
No. 21 Gas Soldering Fur-	
nace	3 00
No. 110 Automatic Gas	
Soldering Furnace.	10 50

Double Blast Mfg. Co.

Gasolene, Nos. 25 and 26.	50%
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Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Discot. for large	
quantities)	

Chas. A. Homes, Inc.

Bussor No. 1.	\$ 9 00
Bussor No. 2.	12 00
Bussor No. 32.	13 00
Bussor No. 42.	15 00
Bussor No. 43.	19 00

GALVANIZED WARE

Pails (Galv. after made),	
10-qt.	\$2 30
10-qt.	\$2 25

GLASS

Single Strength, A. 25-in.	
bracket	85%
Single Strength, A. 34 to 40-	
in. bracket	82%
Single Strength A. all other	
brackets	81%
Double Strength A. all sizes.	82%
Tubs (Galv. after made),	
No. 1.	\$6 25
No. 2.	7 20

HANGERS

Conductor Pipe	
Milcor Perfection Wire.	25%
Eaves Trough	
Milcor Helix Wire.	15%
Milcor Triplex Wire.	10%
Milcor Milwaukee Extension	10%
Milcor Steel (galv. after	
forming) List plus.	12 1/2%
Milcor Selflock E. T. Wire.	
List plus	50%

HOOKE

V. & B. No. 1, each.	\$0 20
---------------------------	--------

Conductor

Milcor	
"Direct Drive" Wrought	
Iron for wood or brick.	15%

Hay

V. & B. No. 1, each.	\$0 30
---------------------------	--------

HUMIDIFIERS

"Front-Range," Automatic	
In single lots	50%
In lots of 10 or more.	50-5%
In lots of 25 or more.	50-10%
Vapor pans, etc., each.	50%

LIFTERS

Steve Cover	
Coppered	per grs. \$6 00
Alaska	per grs. 4 75

MALLETS

Tinner's	
Hickory	per doz. \$3 25

MITRES

Galvanized steel mitres, and	
caps, end pieces, outlets.	30%
Milcor	
Galv. one piece stamped.	40%

NAILS

Cut Steel	\$4 25
Cut Iron	4 25
Wire	
Common	1 15
Cement Coated	2 20

UNISHEAR

Portable and compact, Unishear cuts *any flat stock* quicker, better, cheaper—without burr, without distortion of material. Follows any line exactly, stops accurately at any point.

Needs but one operator even on largest work, straight or irregular.

Operates from lamp socket or power circuit. "General Electric Motor."

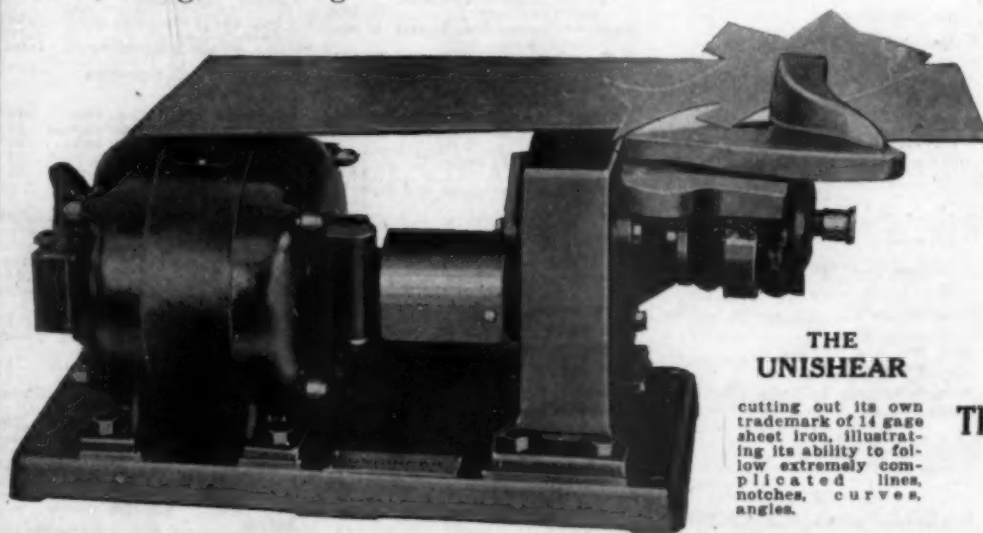
Any Voltage or Cycle Available.

Capacity 14 U. S. gage Sheet Steel.

Speed fifteen feet per minute.

Ask us to demonstrate this machine on your work.

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NETTING, POULTRY

Galvanized before weav-	45-10%
ing	45%
Galvanized after weaving	45%

PASTE

Asbestos Dry Paste:	
200-lb. barrel	\$15 00
100-lb. barrel	8 00
35-lb. pail	3 25
10-lb. bag	1 00
5-lb. bag	55
2 1/2-lb. cartons	30

PIPE

Conductor	
"Interlock" Galvanized	
Crated and nested (all	75-2 1/2%
gauges)	
Crated and not nested	70-15%
(all gauges)	
Square Corrugated A and B and	
Octagon	
25 gauge	60-10%
25 gauge	60-10%
25 gauge	60-10%
25 gauge	60-10%
"Milcor" "Tite-lock" Uniform	

Blue Stove	
25 gauge, 5 inch U. C.	11 00
25 gauge, 6 inch U. C.	12 00
25 gauge, 7 inch U. C.	14 00
30 gauge, 5 inch U. C.	10 00
30 gauge, 6 inch U. C.	10 50
30 gauge, 7 inch U. C.	13 00

T-Joint Made up	
6-inch, 25 ga.	per 100 32 50
Furnace Pipe	
Double Wall Pipe and	
Pipe Fittings	60%
Single Wall Pipe, Round	
Iron Pipe Galvanized	50%
Galvanized and Black	
Fittings	50%
Milcor Galvanized	
Pipe and Fittings	50%

Lead	
Per 100 lbs.	\$12 50

POKERS, STOVE

Wrt Steel, str't or bent,	
per doz.	\$0 75
Nickel Plated, coil handles,	
per doz.	1 10

POKERS, FURNACE

Each	\$0 50
------	--------

PULLEYS

Furnace Tackle	per doz. \$0 60
per gross	6 00
Furnace Screw (encased)	
per doz.	75

Ventilating Register	
Per gross	3 00
Small, per pair	30
Large, per pair	50

PUTTY

Commercial Putty, 100-lb.	
kits	\$2 40

QUADRANTS

Malleable Iron Damper	10%
-----------------------	-----

REDUCERS—Oval Stove Pipe	
Per doz.	
7-6, 1 doz. in carton	\$2 00

BASEBOARD REGISTERS

Excelsior	50%
-----------	-----

FLOOR REGISTERS AND

BORDERS

Cast Iron	20%
Steel and Semi-Steel	40%
Baseboard	40%
Adjustable Ceiling	
Ventilators	40%

Register Faces—Cast and Steel	
Japanned, Bronzed and	
Plated, 4x5 to 14x14	40%
Large Register Faces—Cast,	
14x14 to 38x42	60%
Large Register Faces—Steel,	
14x14 to 38x42	65%

RIDGE ROLL

Milcor	
Galv., Plain Ridge Roll,	
br'd	75-10-5%
Galv., Plain Ridge Roll,	
crated	75-10%
Globe Finials for Ridge Roll	50%

ROOFING

Best grade, slate surf. prep'd	32 30
Best talc surfaced	3 65
Medium talc surfaced	3 00
Light talc surfaced	1 30
Red Rosin Sheeting, per ton	57 00

SCREWS

Sheet Metal	
No. 7, 1/2x1/2, per gross	\$0 52
No. 10, 1/2x1/2, per gross	68
No. 14, 1/2x1/2, per gross	53

SHEARS, TINNERS' &

MACHINISTS'

Viking	\$22 00
--------	---------

Lennox Throatless	
No. 18	25%
Shear blades	10%
(L. O. B. Marshalltown, Iowa.)	

Peerless Steel Squaring

Foot Power	
No. 1-30", 18 ga. cap.	15%
No. 2-36", 18 ga. cap.	15%
No. 4-52", 18 ga. cap.	15%
No. 10-120", 23 ga. cap.	15%
No. 4A-52", 16 ga. cap.	15%

Cast Iron Foot Power

No. 01-30", 18 ga. cap.	15%
-------------------------	-----

Power Driven

No. 100 Series, 3 Shaft Drive.)	
No. 143-42", 18 ga. cap.	15%
(No. 300 Series, 3 Shaft Under-	
neath Drive.)	
No. 242-42", 14 ga. cap.	15%
(No. 300 Series, 3 Shaft Under-	
neath Drive.)	
No. 342-42", 10 ga. cap.	15%
No. 372-72", 10 ga. cap.	15%
(No. 500 Series, 3 Shaft Under-	
neath Drive.)	
No. 588-58", 10 ga. cap.	15%
(No. 600 Series, 3 Shaft Under-	
neath Drive.)	
No. 6120-120", 3/16" cap.	15%

SHOES

Milcor	
Galv. Std. Gauge, Plain or	
corg. round flat crimp.	65%
25 gauge round flat crimp.	40%
34 gauge round flat crimp.	10%
Conductor	65%

SNIPS, TINNERS'

Clover Leaf	40 & 10%
National	40 & 10%
Star	60%
Milcor	Not

SQUARES

Steel and Iron	Net
(Add for bluing, \$3 per doz. net.)	
Mitre	Net
Try	Net
Try and Bevel	Net
Try and Mitre	Net
Fox's	per doz. \$6 00
Winterbottom's	10%

STOPPERS, FLUE

Common	per doz. \$1 10
Gem, No. 1	per doz. 1 10
Gem, flat, No. 3	per doz. 1 00

VENTILATORS ..

Standard	30 to 40%
----------	-----------

WIRE

Plain annealed wire, No. 8	
per 100 lbs.	\$3 05
Galvanized barb wire, per	
100 lbs.	3 90
Wire cloth—Black painted,	
12-mesh, per 100 sq. ft.	3 10
Cattle Wire—galvanized	
catch weight spool, per	
100 lbs.	3 85
Galvanized Hog Wire, 80 rod	
spool, per spool	3 34
Galvanized plain wire, No. 9,	
per 100 lbs.	3 50
Stove Pipe, per stone	1 10

WRINGERS

No. 750, Guarantee	per doz. \$55 00
No. 770, Bicycle	per doz. 52 50
No. 670, Domestie	per doz. 48 50
No. 110, Brighton	per doz. 42 50
No. 750, Guarantee	per doz. 55 00
No. 740, Bicycle	per doz. 52 50
No. 32, pioneer	per doz. 29 00
No. 3, Superb	per doz. 29 00

IWANS' VOLCANO REVOLVING CHIMNEY TOP

THE design of the deflector brings the wind diagonally upward over the chimney opening through opening in lower part of hood. This construction creates a good draft on any chimney.



Simple iron mountings. Sold without hood so you can make your own tops. Strong, inexpensive and easy swinging.

Write today for catalogs and price list.

IWAN BROTHERS
SOUTH BEND, IND.

Manufacturers of Hardware Specialties

Hood
Patterns
FREE
with
order
for
iron
mountings



EARLE'S VENTILATOR

IMPROVED
REVOLVING



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to-
day
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complete
catalog

It runs in a self-lubricating bearing that is not affected by heat or cold. It is noiseless and produces an upward current of air. No down draft. It will satisfy and give you a good profit.

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From a hammer to the
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There's many a short-cut
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up-to-date tools—and—
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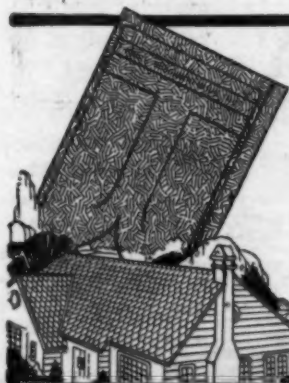


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For paid yearly subscribers, **AMERICAN ARTISAN AND HARDWARE RECORD** will insert under this head advertisements of not more than fifty words **WITHOUT CHARGE**. Employers wishing to secure employees, parties desiring to purchase or sell business, secure partners, or to exchange, etc., will find that these pages offer excellent opportunities to satisfy their wants. Clerks and tinsmiths looking for situations will find it to their advantage to use these columns. Those who respond to these announcements please mention that they "READ THE ADVERTISEMENT IN AMERICAN ARTISAN AND HARDWARE RECORD."

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For Sale — A money maker. A good sheet metal plumbing and radiator shop. Some hardware stock, tinware, etc. All good salable stock. Rent \$25 per month. Leased for five years. The stock and tools will run about \$2,000 or less. Good schools and churches. Population about 3,000. Will trade for another shop; must be in South Dakota. Address A-77, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

For Sale — Hardware and tin shop in Denver, Colorado. One of the best shops in city. Plenty of work and fine business. Cheap rent, fine equipment. Must sell. Will stay with buyer a few months if necessary. Business will run about \$5,000 cash, stock, fixtures and trucks. Address A-76, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 5-3t

For Sale — To sheet metal man wanting to step into an established paying shop in a rapidly growing city in Nebraska. With or without building, stock and tools, about \$2,000, no junk, good healthy financial condition. Will stand closest investigation. Address A-82, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

For Sale — Sheet metal shop fully equipped with tools and stock. Shop is 40x60 ft. with office and garages, also 7 room modern house on same lot 3 1/2 x 9 rods. Very close in and fine location for a furnace agency. For full particulars write F. G. Oberlin, 214 South Larch St., Lansing, Michigan. 4-3t

For Sale — \$1,000 buys a well equipped sheet metal and radiator shop, doing good business for seven years, located in a city of 22,000 population, good reasons for selling. Write for particulars to the Automobile Sheet Metal Company, corner 4th and Market Street, Winona, Minnesota. 5-3t

For Sale — First-class sheet metal shop with one-ton Ford truck. This shop has been established six years. Machinery in first-class condition. Good reason for selling. Will sell cheap. Only a small cash payment needed. Call Vincennes 4146, or address 361 East 69th Street, Chicago, Illinois. 5-3t

For Sale — Stock of hardware. Tinner's tools, fixtures and truck. Inhabitants 4500. Good paying business. Best reason for selling. Would like to get out of business on or before February 15. If interested address A-73, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 5-3t

BUSINESS CHANCES

For Sale — Stock of hardware, \$6,000 to \$7,000, in a good farming country. Large territory. High school, two churches. Will sell or rent building. A good chance for a good tinner. Reason for selling on account of old age. Address Asemussen & Klinger, Oelrichs, South Dakota. 5-3t

For Sale — Established fully equipped tin shop in Port Arthur, Texas. Population 40,000. Retiring on account of old age. Opportunity for a hustler. Address P. A. Wutke, 1712 5th Street, Port Arthur, Texas. 5-3t

For Sale — Sheet metal, heating, radiator shop and sporting goods, in the fastest growing town in the northwest. Best of reasons for selling. Address A-71, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 5-3t

For Sale — Plumbing, heating and tin shop in south eastern Iowa. Only shop in county seat. Good business. Poor health reason for selling. Address J. W. Minnich, Keosauqua, Iowa. 7-3t

For Sale — Tinsmith shop with two brakes, hand machines and hand tools. Good business section. Reasonable. Address 1950 Gratiot Avenue, Detroit, Michigan. 7-3t

HELP WANTED

Wanted — A competent plumber, tinner and furnace man. Must be sober and industrious and capable of taking charge of shop and giving estimates. To such a man we have a very attractive proposition to offer that will be permanent. Located in the best OIL CITY in the TEXAS PANHANDLE. Address Lewis Hardware Company, Panhandle, Texas. 7-3t

Wanted — Two good furnace salesmen to sell warm air heating systems direct to home owners in Moline, Rock Island and Davenport. Wonderful opportunity to make money. Will teach the fine points of the game. We sell and install the finest furnaces and heating systems in America. Address General Manager E. A. Freed, 1530 3rd Avenue, Moline, Illinois. 4-3t

Tinner Wanted — To work for yourself. Stop punching the clock. With \$5.00 stock and hand tools you can make \$10 to \$20 per day at home or travel. I am doing it, so can you. Printed instructions \$2.00. Remit \$1.00 with letter and balance when you make it. Address L. E. Miller, Goodland, Indiana. 3-4t

Wanted — First-class tinner and furnace man who will be willing to invest not less than \$500 in stock in the company, that can show a fair profit for the past three years. Must be able to estimate tin and furnace work. Address Seeger Sheet Metal & Furnace Company, 660 3rd Street, Milwaukee, Wisconsin. 5-3t

Wanted — An experienced gas range man to take charge of production and assembly of gas range department. Must know constructions, and all details of manufacturing. State age, experience, and salary expected. Address A-86, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

Wanted — A good tinner and sheet metal worker. Inside and outside work. Steady job for one that shows interest in his work. Eastern Iowa city of 16,000. State wages and references. Address A-80, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Wanted — At once good all around sheet metal workers. Must be up-to-date. Plenty of work. 8 hours a day. \$1.50 an hour. Don't waste time to write, come at once. Address Pioneer Cornice Works, 150 North West 5th Street, Miami, Florida. 7-3t

Wanted — Good tinner and sheet metal worker. Knowledge of plumbing desirable, but not necessary. Not over 35 years of age. Good city. Good wages paid to man who can deliver. Address Milton L. Kisler, Alexander City, Alabama. 5-3t

Wanted — Good tinner for inside and outside work. One who is able to layout work from blue prints, and erect work. Steady job to right man. Married man preferred. Address J. R. Everroad, Columbus, Indiana. 7-3t

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Situation Wanted — A first class furnace stove and heating salesman, wants position as traveling salesman. Would consider salary and bonus or straight commission with advance weekly drawing account. 30 years experience. Address A-87, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

Situation Wanted — I would like to hear from some hardware firm that needs the service of a good sheet metal and practical furnace man with years of experience. Good references. Steady position. Might consider installation proposition with a good line of furnaces. Address A-85, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Situation Wanted — Position by first class sheet metal worker. Can do anything in sheet metal line and layout own patterns. Forty years of age. Can do estimating and fully capable of taking charge of shop as foreman or superintendent. Expert on blower and ventilating systems. Address Arno C. Goethel, care Ludwig Hotel, Winona, Minnesota. 5-3t

Situation Wanted — By a married man with twenty years' experience in heating, plumbing, sheet metal, pump and windmill work. Do not use tobacco or liquor in any form. Can furnish the best of references. Can start work at any time. State wages in first letter. Address A-75, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 5-3t

Situation Wanted — By sheet metal worker and furnace man. Am a married man, 26 years of age, with six years of practical experience. Am honest and energetic. Have a desire to learn. Address A-81, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Situation Wanted — An all around plumber, tinner and furnace man who understands steam and hot water heating and all around repairing. Will go anywhere. Address A-83, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Situation Wanted — By sheet metal worker as shop man or inside foreman. Good on cornice, skylight, heating, ventilation and blowpipe on any and all classes of sheet metal work. Middle age. Steady job. Address D. C. C., 948 North Illinois Street, Indianapolis, Indiana. 5-3t

Situation Wanted — Hardware man wishes to connect with A1 firm. Have had 12 years' experience. Only steady position considered. Married. Can give A-1 references. Address A-74, care AMERICAN ARTISAN, 620 South Michigan Ave., Chicago, Illinois. 5-3t

Situation Wanted — By a furnace installer on new and old houses. Understand the furnace business. Want position with some reliable firm. Address A-79, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Situation Wanted — Tinner and warm air furnace installer wants position with hardware firm. Small town west of Mississippi river. Address A-78, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

Situation Wanted — Young married man wants position as tinner, plumber and furnace man in Iowa, Minnesota or Wisconsin. State salary in first letter. Steady job only considered. Address Harold J. Kelleher, Clear Lake, Iowa. 5-3t

Situation Wanted — By experienced sheet metal and furnace man. Nothing but steady job. State wages. Married. Steady worker. Address 1114 11th Street, Sioux City, Iowa. 6-3t

Situation Wanted — First-class furnace and sheet metal man wants position with good firm, in central states preferred. Missouri, Iowa, Wisconsin or Illinois. State wages, etc. Address Edward Thiel, Springfield, Missouri. 6-3t

Situation Wanted — By first-class tinner who also does plumbing. Married and reliable. Capable of estimating and laying out work. Address A-84, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 6-3t

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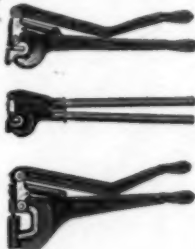
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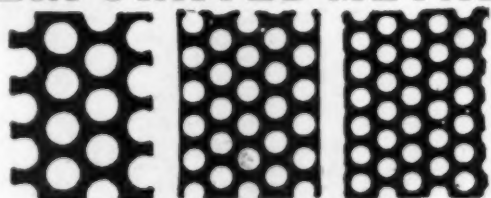
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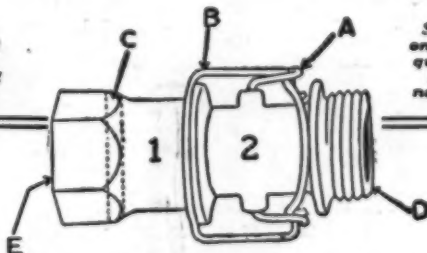
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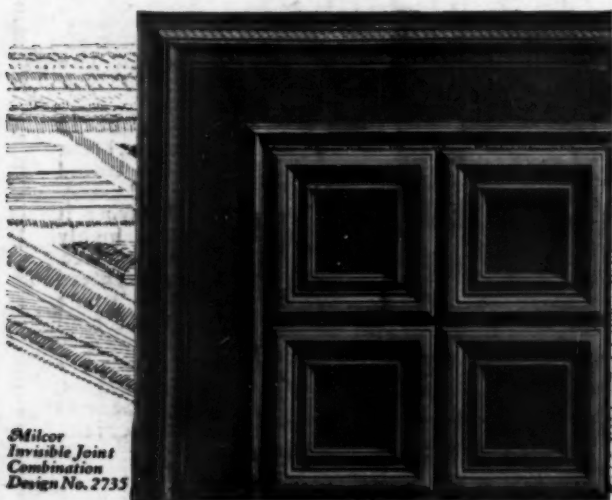
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